

Cow-Calf Business Arrangements for Traditional Grain Farmers

**Final Report Submitted to the
Canadian Farm Business Management Program in
Saskatchewan**

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1.0 Introduction

The removal of the statutory rail subsidy on movement of prairie grain will result in a redefining of the agricultural economy in Saskatchewan. Lower expected net farm incomes from export oriented commodities, have resulted in farmers looking for alternatives to wheat, barley and canola. They are becoming more aware of the full impact of the increased transportation cost. These is also a concern that future deregulation will lead to even higher freight rates. One potential alternative is forage production, particularly on marginal lands. Forage tends to be grown for the local market, it is not directly affected by the increased freight rates under the changed legislation.

The farmer who already has a cow-calf operation may be able to increase his/her herd size assuming that s/he can obtain the necessary capital. However, many traditional grain farmers are not in a position to begin a livestock operation due to a lack of capital. If they had sufficient capital, they may be willing to invest in a strategic alliance with cattle producers. This report will provide grain farmers with alternatives which may be consider if they wish to enter into a cattle production business venture.

1.1 Problem Statement

As the relative profitability shifts from export grains and oilseeds production to forage production, increased supply of forages will depress prices unless the local market for feed is expanded. Farmers entering forage production must also have a way of managing the risk associated with volatile prices. One way to accommodate these problems is an alliance with cow-calf producers. Under such an arrangement, farmers would have the benefit of improved prices through increased local demand for forage and increased returns and risk management through

participation in value-added production (cattle production) and through crop diversification.

1.2 Objective of the Study

The objective of the study is to examine potential strategic alliances between cow-calf producers with grain/forage producers. Specifically, this study will consider the set up of cattle operations where the grain/forage producer supplies pasture, hay, land, labour, management, and/or capital to the operation and the cow-calf producers supplies cattle, labour, management, and/or capital. The resulting operation could be set up as a new generation co-operative, a partnership, a limited partnership, a corporate share structure or simply a strategic alliance.

2.0 Methodology

In order to evaluate each of the alternative strategic alliances, some measure of profitability must be used. Two profitability measures are used in order to have a more accurate comparison among the alternative strategic alliances, they are; average net return and internal rate of return (IRR). The average net return is the average of the summation of all income minus all costs, including depreciation and interest on investment, within a given year over a number of years. The IRR is a widely used method when deciding among various investment opportunities. The IRR is defined as the discount rate, which sets the present value of the net cash flows resulting from the investment over its life equal to zero. In other words, the present value of all future cash flows discounted at the IRR must be equal to the initial investment.

The Marginal Land Use Model (MLUM), an Excel spreadsheet template, originally developed for the Grazing and Pasture Technology Management Program has been modified for this project. The modifications include allowing the user to designate which expense items

are the responsibility of the two parties in a strategic alliance. Added to each of the income statements is a column which allows the user to input either a T or an L, standing for Tenant and Landlord, respectively. This allows the user to determine which of several possible arrangements is the most appealing. There is a contribution sheet which then outlines the results according to your particular business arrangement. It shows the exact dollar amount that both the tenant and landlord contribute, as well as their percentage.

The MLUM was further modified by allowing the user to designate an 'S', which represents 'split' or percentage contributed by the tenant and the landlord on individual categories of expenses. An example would be the splitting of fertilizer by 33.3% for the landlord and 66.6% for the tenant. The split would allow for a more accurate measurement of expenses, instead of having the tenant or the landlord pay the total cost for that particular expense. It follows that the two parties to the agreement will then share the income by the same percentages as all the costs were shared.

A measure of relative risk was also included in the methodology by adding the @Risk program to the MLUM. Crop, forage, and livestock prices and crop and forage yields were allowed to vary. The distributions used were approximated normal distributions using the triangular methodology where the lowest, highest, and most likely level of the variable are designated. The expected prices and yield from the Saskatchewan Agriculture and Food (SAF) data were used as the most likely with the lowest being a 42% drop and the highest being a 42% increase. The 42% variation stems from the most likely crop yield used in the SAF data and the designated 20% increase on crop insurance yields plus the 70% crop insurance coverage ($100\% / 120\% \times 70\% = 58\%$). Correlations between crop, forage, and livestock prices and yields were

assumed to be zero. This assumption may not be realistic, but the calculation of correlations coefficients is beyond the scope of this study.

3.0 Results

The calculations were completed for each of the enterprises and soil zones and are summarized in Table 1. Descriptions of the benchmark crop, forage, steer grazing and cow-calf operations appear in the Appendices which includes the input sheets and net income statements with resulting IRRs.

Table 1: Net Return Over Variable Costs (\$per acre), Net Return over All Costs (\$per acre), and Internal Rate of Return (IRR) (%), by Enterprise and Soil Zone

	Crops	Forage	Steers	Cow-calf
Black Soil Zone				
Net Return over Variable Costs	\$50.93	\$25.88	\$50.02	\$47.95
Net Return over All Costs	-\$20.37	-\$1.42	\$4.62	-\$32.68
Internal Rate of Return (IRR)	0.5%	5.1%	6.7%	2.1%
Dark Brown Soil Zone				
Net Return over Variable Costs	\$46.33	\$39.86	\$50.02	\$47.95
Net Return over All Costs	-\$16.66	\$12.56	\$5.25	-\$32.68
Internal Rate of Return (IRR)	1.3%	11.2%	7.0%	2.1%
Brown Soil Zone				
Net Return over Variable Costs	\$33.53	\$10.05	\$50.02	\$47.95
Net Return over All Costs	-\$14.66	-\$17.25	\$5.95	-\$32.68
Internal Rate of Return (IRR)	1.1%	-2.3%	7.3%	2.1%

As can be seen in Table 1, on average, grazing steers was the most profitable enterprise in the Black and Brown soil zones and the second most profitable enterprise in the Dark Brown soil zone. Forage was the most profitable enterprise in the Dark Brown soil zone and the second

most profitable in the Black soil zone, but the least profitable enterprise in the Brown soil zone. The crops enterprise was the least profitable enterprise in the Black and Dark Brown soil zones and the second least profitable enterprise in the Brown soil zone.

The second scenario involved calculating the contribution made by the landlord (grain/forage farmers) and tenant (cattle farmer). The first calculation method used average variable cash costs and average fixed cost calculations including depreciation and interest on investment. The second method discounted cash flows over the eight year period to calculate a net present value (NPV). The results are presented in Table 2.

In the crops enterprises, incomes should be shared 25% for the landlord and 75% for the tenant in the Black and Dark Brown soil zones and between 28% and 31% for the landlord and between 69% and 72% for the tenant in the Brown soil zone. In all cases the landlord supplies 1/3 of the seed, fertilizer, and chemicals.

In the forage enterprises, incomes should be shared approximately 30% for the landlord and 70% for the tenant in all soil zones, with the landlord paying for and harvesting the cover crop in the first year, but the tenant paying 2/3 of the fertilizer every year thereafter.

In the steer grazing enterprises, incomes should be shared between 15% and 19% for the landlord and between 81% to 85% for the tenant depending on the method of calculation for all soil zones. In all cases the landlord pays for and harvesting the cover crop in the first year.

In cow calf enterprises, incomes should be shared between 22% and 29% for the landlord and between 71% and 78% for the tenant depending on the method of calculation for all soil zones. In all cases the landlord pays for and harvesting the cover crop in the first year.

Table 2: Landlord-Tenant Share of Costs by Calculation Method, Enterprise, and Soil Zone.

Black Soil Zone

Method 1: Average Variable and Fixed Costs

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
75%	25%	72%	28%	82%	18%	78%	22%

Method 2: NPV

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
75%	25%	70%	30%	85%	15%	71%	29%

Dark Brown Soil Zone

Method 1: Average Variable and Fixed Costs

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
75%	25%	72%	28%	82%	18%	78%	22%

Method 2: NPV

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
74%	26%	70%	30%	85%	15%	71%	29%

Brown Soil Zone

Method 1: Average Variable and Fixed Costs

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
72%	28%	71%	29%	81%	19%	78%	22%

Method 2: NPV

Crops		Forage		Steers		Cow-calf	
Tenant	Landlord	Tenant	Landlord	Tenant	Landlord	Tenant	Landlord
69%	31%	70%	30%	85%	15%	71%	29%

The third scenario involved a risk efficiency analysis of the enterprises. The program @Risk, an Excel add-on, was used to see the effect of price and yield variability on the calculations. Figures 1, 2, and 3 present the mean-standard deviation trade-off for each of the enterprises by soil zone. As can be seen from Figures 1, 2, and 3, the cow-calf enterprise was the low risk enterprise for all three soil zones. This was probably because the enterprise only had price risk on the sale of calves as it was assumed that weaning weights would stay constant.

The steer enterprise was the most profitable enterprise in all three soil zones, but was also had a higher standard deviation than the cow-calf enterprise. The cow-calf and steer enterprises were the risk efficient enterprises in all three soil zones. The choice between the cow-calf and steer enterprise depends on the amount of risk aversion the decision maker has. A less risk averse individual would choose steers over the cow-calf enterprise. The crops and forage enterprises are not risk efficient when compared to the cow-calf and steer enterprises in that income is lower and/or variation of income were increased in these enterprises.

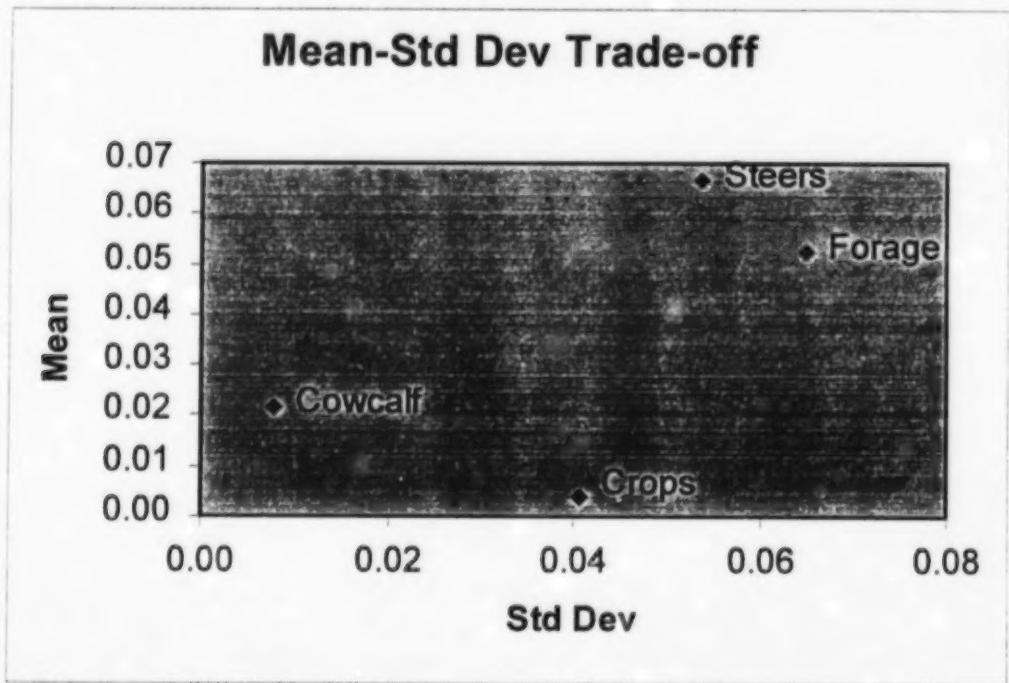


Figure 1: Mean-Standard Deviation Trade-off by Enterprise, Black Soil Zone

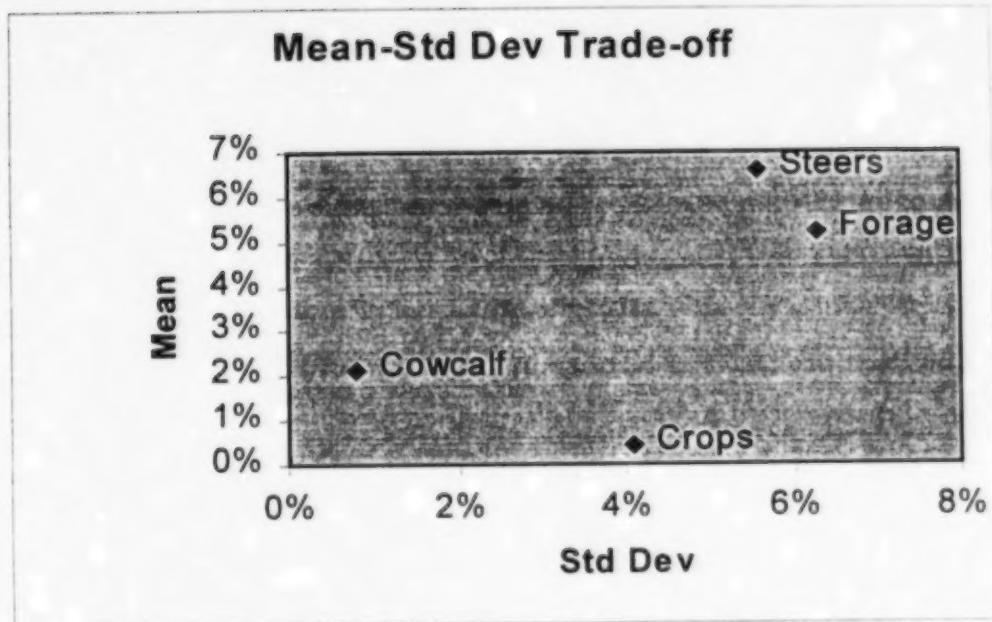


Figure 2: Mean-Standard Deviation Trade-off by Enterprise, Dark Brown Soil Zone

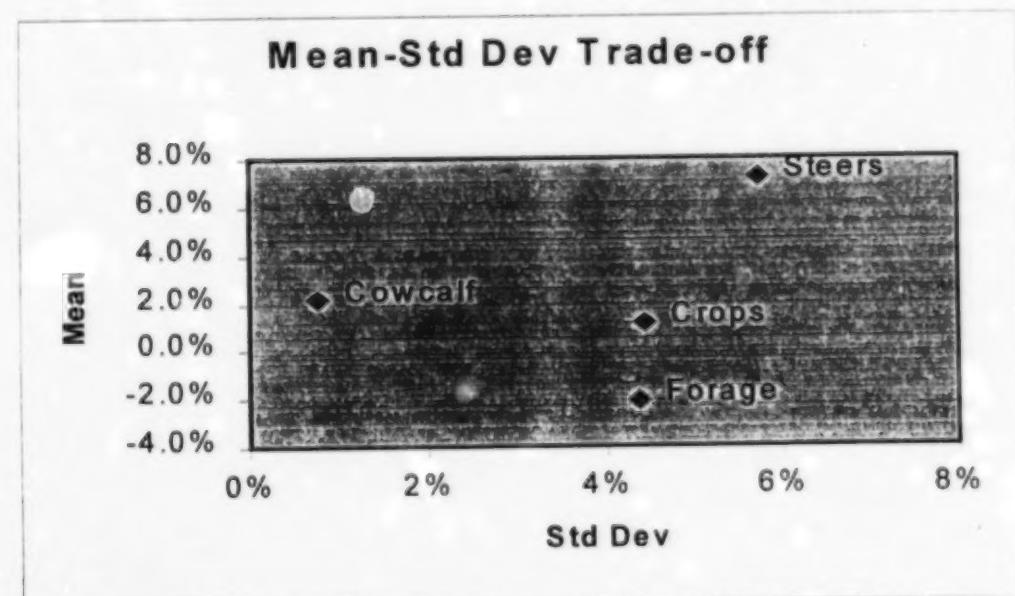


Figure 3: Mean-Standard Deviation Trade-off by Enterprise, Brown Soil Zone

Figures 4, 5, and 6 present the cumulative distributions for each of the enterprises by soil zone. As can be seen from Figures 4, 5, and 6 The cow-calf enterprise appears to be the safest enterprise in all three soil zones with no chance of a negative IRR, but also no chance of making more than 4% IRR. The steer enterprise was the most profitable and also has the least chance (@15% to 20%), except for the cow-calf enterprise, of a negative IRR in all three soil zones. The crops enterprise is the least profitable enterprise in the Black and Dark Brown soil zones with approximately a 60% to 70% chance of a negative IRR. The forage enterprise is the least profitable enterprise in the Brown soil zone with approximately an 80% chance of a negative IRR.

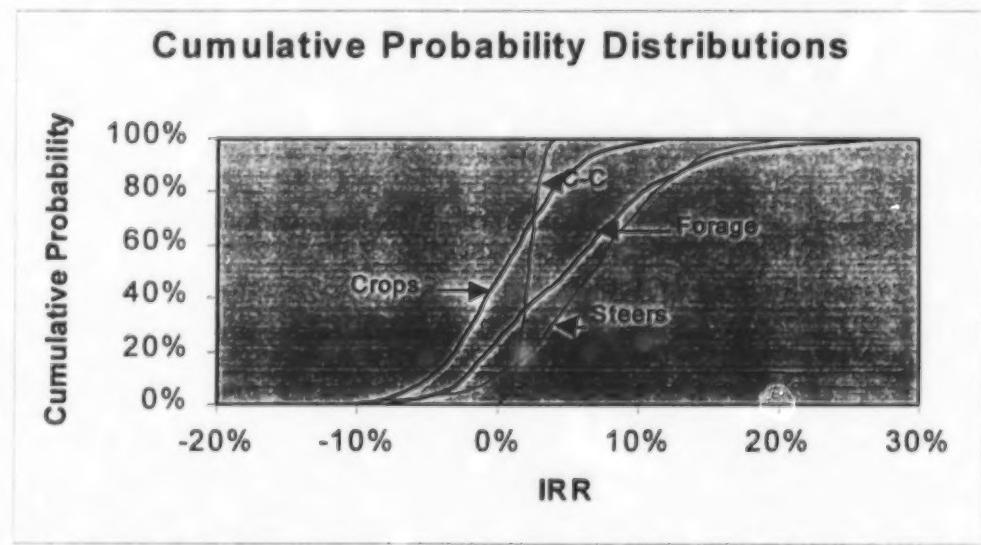


Figure 4: Cumulative Probability Distribution by Enterprise, Black Soil Zone

Cumulative Probability Distributions

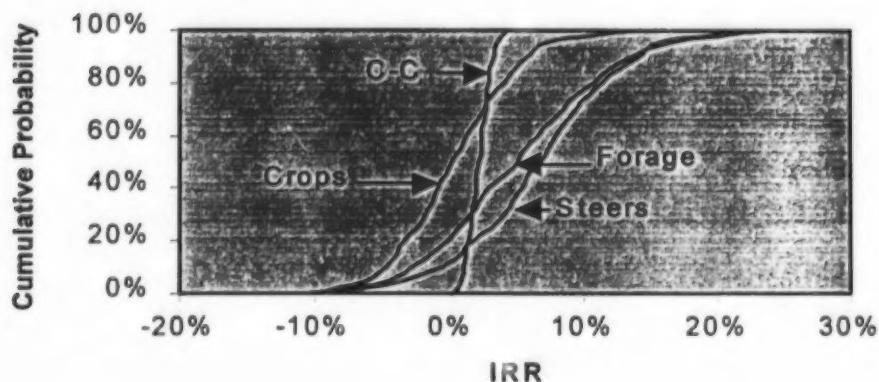


Figure 5: Cumulative Probability Distribution by Enterprise, Dark Brown Soil Zone

Cumulative Probability Distributions

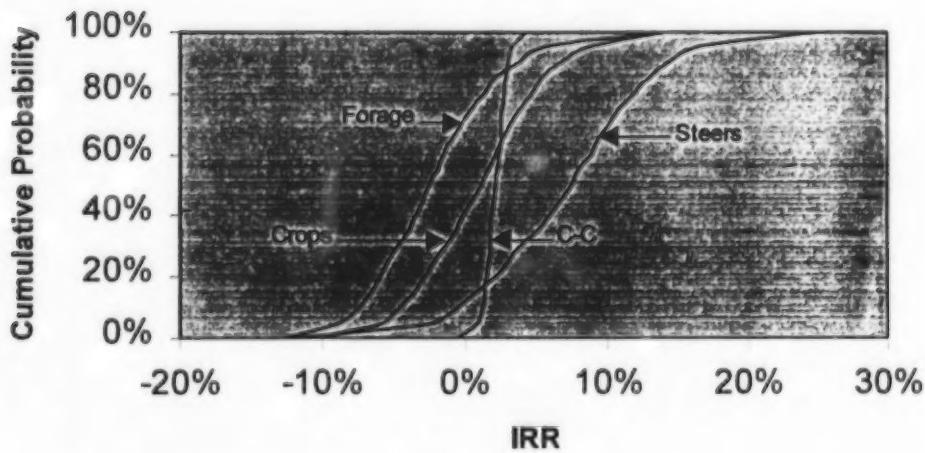


Figure 6: Cumulative Probability Distribution by Enterprise, Brown Soil Zone

4.0 Extension Activities

A variety of extension meetings were held in order to make the research results available to farmers.

June, 1998 – Dilke – 5

February, 1999 – Borden

March – Kindersley - 60

Elrose - 20

Beechy - 15

Raddison - 20

Kaus? - 20

Ruthilda - 30

Delisle - 20

Aberdeen – 30

Comments

People want the program

Worked in group setting based on consensus

Forage and Cow/calf best in almost all cases

Half and half cropping did better than continuous

5.0 Conclusions

The objective of the study was to examine potential strategic alliances between cow-calf producers with grain/forage producers. Specifically, this study considered the fair share of returns of cattle operations where the grain/forage producer supplies pasture, hay, land, labour, management, and/or capital to the operation and the cow-calf producers supplies cattle, labour, management, and/or capital. The study also investigated the relative risks associated with the various enterprises involved in the alliances.

The analysis began by calculating the profitability by soil for typical crop, forage, grazing steer and cow-calf enterprises. Grazing steers was the most profitable enterprise in the Black and Brown soil zones and the second most profitable enterprise in the Dark Brown soil zone. Forage was the most profitable enterprise in the Dark Brown soil zone and the second most profitable in the Black soil zone, but the least profitable enterprise in the Brown soil zone. The crops enterprise was the least profitable enterprise in the Black and Dark Brown soil zones and the second least profitable enterprise in the Brown soil zone.

The fair share between landlord and tenant by enterprise and soil zone was calculated next. There was little difference found between the two calculation methods used. In the crops and forage enterprises, incomes should be shared between 25% and 31% for the landlord and between 69% and 75% for the tenant in all soil zones. In all cases the landlord supplies 1/3 of the seed, fertilizer, and chemicals. In the steer grazing and cow-calf enterprises, incomes should be shared between 15% and 31% for the landlord and between 69% and 85% for the tenant depending on the method of calculation for all soil zones. In all cases the landlord pays for and harvesting the cover crop in the first year.

The relative risk of profitability by enterprise and by soil zone was calculated next. The cow-calf and steer enterprises were the risk efficient enterprises in all three soil zones. A less risk averse individual would choose steers over the cow-calf enterprise. The crops and forage enterprises are not risk efficient when compared to the cow-calf and steer enterprises in that income is lower and/or variation of income is increased in these enterprises.

The cow-calf enterprise appeared to be the safest enterprise in all three soil zones with no change of a negative IRR, but also no chance of making more than 4% IRR. The steer enterprise was the most profitable

and also has the least chance (@15% to 20%), except for the cow-calf enterprise, of a negative IRR in all three soil zones. The crops enterprise was the least profitable enterprise in the Black and Dark Brown soil zones with approximately a 60% to 70% chance of a negative IRR. The forage enterprise was the least profitable enterprise in the Brown soil zone with approximately an 80% chance of a negative IRR.

6.0 Reference List

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7.0 Appendices

7.1 Appendix A – Enterprise Input and Output – Brown Soil Zone

	0	1	2	3	4	5	6	7	8
YEAR									
Soil Zone (1=brown, 2=dark brown, 3=black)									
Land Location	W3								
Parcel 1									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation									
Crop Name		Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble
Parcel 2									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation									
Crop Name		Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow
Parcel 3									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation									
Crop Name		Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded
Parcel 4									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation									
Crop Name		Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble
Parcel 5									
Number of Acres	0								
Land Cost (\$/acre)	250								
Crop Rotation									
Crop Name		Spring Wheat stubble	Tillage Fallow	Lentil fallow seeded	Spring Wheat stubble	Tillage Fallow	Mustard fallow seeded	Spring Wheat stubble	Tillage Fallow
Total Number of Acres	400								
Financial Info									
Discount Rate	5%								
Int Rate on Op Loan	5%								
Building Repar Rate	2%								
Machinery Depreciation Rate	10%								
Building Depreciation Rate	5%								
Inv Cost on Mach and Buildings	5%								
Inv Cost on Land	5%								

	1	2	3	4	5	6	7	8	9
	Tillage Fallow	Chem Fallow	Spring Wheat	Durum Wheat	CPS Wheat	Feed Barley	Feed Oats	Fallow Seeded	
Revenue per Acre									
Most Likely yield (bu./lb./acre)	0.0	0.0	30.8	30.8	40.9	48.8	53.3	18.4	1107.0
Most Likely Farm Price (\$/bu., lb.)	0.00	0.00	4.03	3.80	3.46	2.07	1.33	8.10	0.17
	1	2	3	4	5	6	7	8	9
	Tillage Fallow	Chem Fallow	FS Spring Wheat	FS Durum Wheat	FS CPS Wheat	FS Feed Barley	FS Feed Oats	Fallow Seeded	
EXPENSES PER ACRE									
Variable Expenses/acre									
Seed	0.00	0.00	6.33	10.79	6.50	5.25	6.40	5.40	18.20
Fertilizer	Nitrogen	0.00	0.00	4.80	4.80	4.80	4.80	4.80	0.96
	Phosphorus	0.00	0.00	5.80	5.80	5.80	5.80	5.80	5.80
Chemicals	Sulfur & other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Herbicides	2.83	14.79	10.53	10.53	10.53	10.53	7.00	19.21
	Insecticides	0.00	0.00	1.20	1.20	1.20	0.00	0.00	2.13
Machinery Op	Others	0.00	0.00	1.52	1.72	1.72	1.58	1.50	0.66
	Fuel	3.70	0.74	6.29	6.29	6.29	6.29	6.29	7.03
	Repair	2.10	1.50	6.00	6.00	6.00	6.00	6.00	9.00
Custom Work & Hired Labour		1.50	0.00	5.00	5.00	5.00	4.00	4.00	3.00
Crop Ins Premium		0.00	0.00	4.48	5.29	7.20	6.37	6.25	17.25
Utilities & Miscellaneous		2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01
Interest on Variable Exp		1.19	1.86	1.75	1.92	1.85	1.70	1.62	3.31
Other Expenses (Miles)									
Property Taxes		3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Insurance & Licenses		1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Labour & Management		13.46	13.46	13.46	13.46	13.46	13.46	13.46	13.46
Value of Investment		42.00	30.00	120.00	120.00	120.00	120.00	120.00	150.00
Machinery		19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Building									

Input Sheet										
Input for Steer Operation										
Financial Information (Livestock) (see help files)		5%								
Discount Rate		5%								
Int Rate on Op Loan		5%								
Building Repair Rate		2%								
Machinery Depreciation Rate		10%								
Building Depreciation Rate		5%								
Inv Cost on Mach and Buildings		5%								
Inv Cost on Land		5%								
Land Information (Steers)		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres		100	100	100	100	0				
Stocking Rate (AU/Acre)		1.2	1.2	1.2	1.2	1.2				
Land Cost (\$/acre)		250	250	250	250	250				
Property Tax (\$/acre)		4.75	4.75	4.75	4.75	4.75				
Nurse Crop (1 for Yes, 0 for No)		1	1	1	1	1				
Area of Province (N-North, S-South)		5								
Length of Grazing Period		6	6	6	6	6				
Animal Unit Months		120	120	120	120	0				
Animals Grazed on Parcel		30	30	30	30	0				
Grazing Information (Steers)										
Pasture seeding required (1 for Yes, 0 for No)		1								
Total Number of Acres		400								
Total Animal Unit Months		480								
Steers Grazed on Above		120								
Capital Value		Initial Capital Investment (amount for steer operation only)								
Tenant Cont'n (machinery, etc)		1200.00	1200.00	1080.00	972.00	874.80	787.32	708.59	637.73	573.96
Landlord Cont'n (machinery, etc)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tenant Cont'n (fences, water, etc)		0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ldfrd Cont'n/fence water chute etc.)		4600.00	4600.00	4370.00	4151.50	3843.93	3746.73	3559.39	3381.42	3212.35
Total Capital Investment		5800.00	5800.00	5450.00	5123.50	4818.73	4534.05	4267.98	4018.15	3786.31
Steer Revenue										
YEAR		0	1	2	3	4	5	6	7	8
Market Weight (lb)		900	900	900	900	900	900	900	900	900
Price (\$/lb)		0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Total Revenue (\$/steer)		819.00	819.00	5819	5819	5819	819	5819	5819	5819
Nurse Crop Revenue										
Nurse Crop Yield (.bu/bacs)		31.4	0	0	0	0	0	0	0	0
Nurse Crop Price (\$/bu)		3.55	0	0	0	0	0	0	0	0
Total Revenue (\$/acre)		111.47	0	0	0	0	0	0	0	0
Steer Expenses										
YEAR		0	1	2	3	4	5	6	7	8
VARIABLE EXPENSES										
Purchase Price		0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Purchase Weight		550	550	550	550	550	550	550	550	550
Death Loss %		2%	2%	2%	2%	2%	2%	2%	2%	2%
Vet and Medicine (\$/steer)		6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15
Trucking (\$/steer)		11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
Selling Commission (\$/steer)		11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75
Utilities(\$/steer)		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Fuel, Lube and Repairs (\$/steer)		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Miscellaneous (\$/steer)		7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Supplements on Pasture (\$/steer)		17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19
OTHER EXPENSES										
Fence Repair (\$/steer)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Nurse Crop Costs (\$/acre)										
Seed, Fertilizer, Herbicides		48.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery Fuel and Repair		21.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other		9.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Nurse Crop Costs		80.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Established Pasture Costs										
Fertilizer Cost (\$/acre)		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 - 40 fertilizer spreader		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Yearly Pasture Costs		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seeding (\$/acre)										
1 - fertilizer spreader		0.5	0	0	0	0	0	0	0	0
1 - 20 press drill		2.7	0	0	0	0	0	0	0	0
Alfalfa seed (2 lbs/acre)		3.6	0	0	0	0	0	0	0	0
Crested W seed (3 lbs/acre)		3.9	0	0	0	0	0	0	0	0
Fertilizer (30 lbs/acre, \$3/b)		5	0	0	0	0	0	0	0	0
Total Cost		\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest										
Interest on Operating (\$/steer)		15.01	27.20	27.20	27.20	27.20	27.20	27.20	27.20	27.20
Labour and Management										
Labour and Man (\$/steer)		90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00

Input Sheet
Input for Cow-Calf Operation

YEAR	0	1	2	3	4	5	6	7	8
Financial Information (Cow-Calf)									
Discount Rate	5%								
Int Rate on Op Loan	9%								
Building Repair Rate	2%								
Machinery Depreciation Rate	10%								
Building Depreciation Rate	5%								
Inv Cost on Mach and Buildings	5%								
Inv Cost on Land	5%								
Land Information (Cow-Calf)									
Number of Acres	100	100	100	100	0				
Stocking Rate (AUM/acre)	1.2	1.2	1.2	1.2	1.2				
Land Cost (\$/acre)	250	250	250	250	250				
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75				
Nurse Crop (1 for Yes, 0 for No)	1	1	1	1	1				
Length of Grazing Period	5	5	5	5	5				
Animal Unit Months	120	120	120	120	0				
Animals Grazed on Parcel	20	20	20	20	0				
Grazing Information (Cows)									
Pasture seeding required (1 for Yes, 0 for No)	1								
Total Number of Acres	400								
Total Animal Unit Months	480								
Cows grazed on above land	80								
Nurse Crop Revenue									
Nurse Crop Yield (t, bu/acre)	31.4								
Nuse Crop Price (\$/t,bu)	3.55								
Total Revenue (\$/acre)	111.47								
Cows									
Avg Weight (lbs)	0	1200	1200	1200	1200	1200	1200	1200	1200
Value of New Cow	0	1100	1100	1100	1100	1100	1100	1100	1100
Cull Cow	0	700	700	700	700	700	700	700	700
Death loss of cows	0	1%	1%	1%	1%	1%	1%	1%	1%
Cow replace rate	0	12%	12%	12%	12%	12%	12%	12%	12%
Bulls									
# of cows required for one bull	0	30	30	30	30	30	30	30	30
# of bulls required	0	3	3	3	3	3	3	3	3
Value of new bull	\$0	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Value of cull bull	\$0	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Useful life of bull (years)	0	4	4	4	4	4	4	4	4
Death loss of bulls	0%	2%	2%	2%	2%	2%	2%	2%	2%
Calves									
Male Calf price (\$/lb)	\$0.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Female Calf price (\$/lb)	\$0.00	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Calving percent	0%	94%	94%	94%	94%	94%	94%	94%	94%
Post calving death loss	0%	4%	4%	4%	4%	4%	4%	4%	4%
Weaning per cent	0%	90%	90%	90%	90%	90%	90%	90%	90%
Average Weaning Wts (lb)									
Weaning wt of steers	0	550	550	550	550	550	550	550	550
Weaning wt of heifers	0	520	520	520	520	520	520	520	520
Other Production Info									
Winter feeding period (days)	0	180	180	180	180	180	180	180	180
Fence & Mach Repair Rate	0%	2%	2%	2%	2%	2%	2%	2%	2%
Prices									
Hay price (\$/tonne)	\$0.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Barley price (\$/tonne)	\$0.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00
Straw price (\$/tonne)	\$0.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Salt (\$/kg)	\$0.00	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18
1:1 trace mineral (\$/kg)	\$0.00	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54
Protein Supplement (\$/kg)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Investment									
Buildings and handling fac									
Tenant Contribution (corrals, sheds, fences, etc.)		5339							
Landlord Contribution (fences, water requirements, etc.)		4074							

Input Sheet

Total Value of fence and bldgs	9413								
Equipment for Cow-Calf	10150								
Tenant Contribution (tractor, loader, mixmill, etc.)	0								
Landlord Contribution (Seeder, etc)	0								
Total Equipment	10150								
Land Value	100000								
Value of Cows purchased	88000.00								
Value of Bulls purchased	7200								
Total Capital Investment	214763.00								
		Cow-Calf Expenses							
YEAR	0	1	2	3	4	5	6	7	8
Cows	0	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139
Feed	0	2.502	2.502	2.502	2.502	2.502	2.502	2.502	2.502
Hay	0	100.08	100.08	100.08	100.08	100.08	100.08	100.08	100.08
Tonnes/cow/day	0	0	0	0	0	0	0	0	0
Tonnes/cow/period	0	0	0	0	0	0	0	0	0
Hay Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Barley	0	0	0	0	0	0	0	0	0
Tonnes/cow/day	0	0	0	0	0	0	0	0	0
Tonnes/cow/period	0	0	0	0	0	0	0	0	0
Barley Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Salt	0	12	12	12	12	12	12	12	12
Kg/cow/period	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Salt cost (\$/cow)	0	0	0	0	0	0	0	0	0
Mineral	0	22	22	22	22	22	22	22	22
Kg/cow	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Mineral Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Protein	0	0	0	0	0	0	0	0	0
Kg/cow/period	0	0	0	0	0	0	0	0	0
Protein Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Total Feed Cost (\$/cow)	0	114.12	114.12	114.12	114.12	114.12	114.12	114.12	114.12
Bedding	0	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022
Tonnes/animal/day	0	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396
Tonnes/animal	0	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92
Bedding cost (\$/cow)	0	0	0	0	0	0	0	0	0
Veterinary and Medicine	0	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
IBR,BVD,PI3 & BRSV	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Scour vaccine	0	9	9	9	9	9	9	9	9
Ivomec	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ADE (2 treatments)	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Fly tag	0	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84
Medicine Cost (\$/cow)	0	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Veterinary Cost (\$/cow)	0	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
Vet & Med C (\$/cow)	0	0	0	0	0	0	0	0	0
Vet & Med Cost (calves)	0	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Blackleg	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Flytag	0	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39
Medicine Cost (\$/calf)	0	0	0	0	0	0	0	0	0
Bulls	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Feed	0	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Hay	0	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2
Tonnes/bull/day	0	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Tonnes/bull/period	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Hay cost (\$/bull)	0	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
Barley	0	0	0	0	0	0	0	0	0
Tonnes/bull/day	0	0	0	0	0	0	0	0	0
Tonnes/bull/period	0	0	0	0	0	0	0	0	0
Barley Cost (\$/bull)	0	0	0	0	0	0	0	0	0
Salt & Minerals	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Salt cost (\$/bull)	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Mineral cost (\$/bull)	0	0	0	0	0	0	0	0	0
Protein	0	0	0	0	0	0	0	0	0
Kg/bull/period	0	0	0	0	0	0	0	0	0

Protein Cost (\$/bufl)	0	Input SheR	0	0	0	0	0	0
Total Feed Cost (\$/bufl)	0	157.44	157.44	157.44	157.44	157.44	157.44	157.44
Vet & Med								
Veterinary exam (\$/bufl)	0	20	20	20	20	20	20	20
Semen test	0	60	60	60	60	60	60	60
Veterinary cost	0	10	10	10	10	10	10	10
Vet & Med cost (\$/bufl)	0	90	90	90	90	90	90	90
Trucking	0.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Selling commission (\$/hd)	0.00	15.75	15.75	15.75	15.75	15.75	15.75	15.75
Total costs (\$/hd)	0.00	18.75	18.75	18.75	18.75	18.75	18.75	18.75
Facility and Fence (\$/hd)	0.00	14.71	14.71	14.71	14.71	14.71	14.71	14.71
Manure Removal (\$/hd)	0.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Interest on Cip Loan (\$/hd)	0.00	63.08	17.47	17.47	17.47	17.47	17.47	17.47
Miscellaneous (\$/hd)	0.00	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Supplements on Pstr (\$/hd)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery Dep (\$/hd)	0.00	-126.88	12.69	11.42	10.28	9.25	8.32	7.49
Building Dep (\$/hd)	0.00	0.00	5.88	5.59	5.31	5.04	4.79	4.55
Machinery Inv (\$/hd)	0.00	12.69	11.42	10.28	9.25	8.32	7.49	6.74
Building Investment (\$/hd)	0.00	0.59	11.18	10.62	10.09	9.58	9.10	8.65
Land Investment (\$/hd)	0.00	62.50	62.50	62.50	62.50	62.50	62.50	62.50
Breeding Herd Investment (\$/hd)	0.00	148.75	148.75	148.75	148.75	148.75	148.75	148.75
Breeding Herd Replacement	0.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00
Labour and Management (\$/hd)	0.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00
Seeding (\$/acre)								
1 - fertilizer spreader	0.50							
1 - 20' press drill	2.70							
Alfalfa seed (2 lbs/ac)	3.60							
Crested W seed (3 lbs/ac)	3.90							
Fertilizer (30 lbs/ac, \$3/lb)	9.00							
Total Cost	19.70							
Established Pasture Costs								
Fertilizer Cost (\$/acre)	0							
1 - 40' fertilizer spreader	0.00							
Total Yearly Pasture Costs (\$/acre)	0.00							
Nurse Crop Costs (\$/acre)								
Seed, Fertilizer, Herbicide	48.91							
Machinery Fuel and Repair	21.65							
Other	9.79							
Total Nurse Crop Costs	80.35							
YEAR	0	1	2	3	4	5	6	7
Capital Value								8
Buildings and handling fac								
Tenant Contribution (corrals, sheds, fences, etc.)	0	5339	5072	4816	4578	4349	4131	3925
Tenant Depreciation	0	0.00	\$3.34	\$3.17	\$3.01	\$2.86	\$2.72	\$2.58
Landlord Contribution (fences, water requirements, etc.)	0	4074	3870	3677	3493	3318	3152	2995
Landlord Depreciation	0	0.00	\$2.55	\$2.42	\$2.30	\$2.18	\$2.07	\$1.97
Total Value of fence and bldgs	0	9413	8942	8495	8070	7667	7284	6919
Equipment for Cow-Calf								8573
Tenant Contribution (tractor, loader, mixmill, etc.)	0	10150	9135	8222	7399	6659	5993	5394
Tenant Depreciation	0	0.00	12.69	11.42	10.28	9.25	8.32	7.49
Landlord Contribution (Seeder, etc)	0	0	0	0	0	0	0	0
Landlord Depreciation	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Equipment	0	10150	9135	8222	7399	6659	5993	5394
Land Value	100000							100000
Value of Cows purchased	0	88000						88000
Value of Bulls purchased	0	7200						7200
Total Tenant Capital Invested	0	110689						103,783
Total Landlord Capital Invested	100000	4074						\$102,845
Total Capital Invested	100000	114763						206,628

Input Sheet

Input for Forage Operation

YEAR	0	1	2	3	4	5	6	7	8
Soil Zone (1=brown, 2=dark brown, 3=black)			1						
Land Location	W3								
Land Information (Forage)	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres	100	100	100	100	0				
Land Cost (\$/acre)	250	250	250	250	250				
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75				
Total Number of Acres	400								
Nurse Crop Required (0=No, 1=Yes)	1								
Financial Info									
Discount Rate	5%								
Int Rate on Op Loan	9%								
Building Repair Rate	2%								
Machinery Depreciation Rate	10%								
Building Depreciation Rate	5%								
Inv Cost on Mach and Buildings	5%								
Inv Cost on Land	5%								
Forage Revenue									
	36 Hay Seed Year no Nurse	37 Hay Seed Year Nurse	38 Hay Estab	39 Hay Breaking Year					
Revenue per Acre									
Estimated yield (bu./lb./ac)	0.00	30.6	0.62	0.35					
Farm Price (\$/bu., lb.)	0.00	4.03	70.00	70.00					
Forage Expenses									
	Hay no Nurse	Hay with Nurse	Hay Estab	Hay Breaking					
EXPENSES PER ACRE									
Variable Expenses (\$/acre)									
Seed	7.50	13.83	0.00	0.00					
Fertilizer	Nitrogen 0.00	0.00	0.00	0.00					
	Phosphorus 9.00	9.00	9.00	9.00					
	Sulfur & other 0.00	0.00	0.00	0.00					
Chemicals	Herbicides 0.00	0.00	0.00	0.00					
	Insecticides 0.00	0.00	0.00	0.00					
	Others 0.00	0.00	0.00	0.00					
Machinery Op	Fuel 0.00	0.00	0.00	0.00					
	Repair 0.00	0.00	0.00	0.00					
Custom Work & Hired Labour	29.00	29.00	26.00	34.00					
Crop Ins Premium	0.00	6.10	0.00	0.00					
Utilities & Miscellaneous	2.08	2.01	2.08	2.08					
Interest on Variable Exp	2.14	2.43	1.67	2.03					
Other Expenses (\$/acre)									
Property Taxes	0.00	0.00	0.00	0.00					
Insurance & Licenses	0.00	0.00	0.00	0.00					
Labour & Management	10.00	10.00	10.00	10.00					
Value of Investment									
Machinery	0.00	0.00	0.00	0.00					
Building	0.50	0.50	0.50	0.50					

ANNUAL INCOME STATEMENT												
YEAR	Land Location	W3	Cropping Operation									
			0	1	2	3	4	5	8			
Crop			33,675	33,675	33,675	33,675	33,675	33,675	33,675			
Total Revenue		\$217,851	0	33,675	33,675	33,675	33,675	33,675	33,675			
Expenses	L/T/S	L Share										
Variable Expenses												
Seed	S	33%	1,566	1,566	1,566	1,566	1,566	1,566	1,566			
Fertilizer	Nitrogen	S	33%	2,640	2,640	2,640	2,640	2,640	2,640			
	Phosphorus	S	33%	1,680	1,680	1,680	1,680	1,680	1,680			
	Sulfur & other	S	33%	270	270	270	270	270	270			
Chemicals	Herbicides	S	33%	3,952	3,952	3,952	3,952	3,952	3,952			
	Insecticides	S	33%	291	291	291	291	291	291			
	Others	S	33%	628	628	628	628	628	628			
Machinery	Fuel	T		2,516	2,516	2,516	2,516	2,516	2,516			
	Repair	T		2,010	2,010	2,010	2,010	2,010	2,010			
Custom Work & Hired Labour		T		1,500	1,500	1,500	1,500	1,500	1,500			
Crop Ins Premium		T		1,533	1,533	1,533	1,533	1,533	1,533			
Utilities & Miscellaneous		T		804	804	804	804	804	804			
Interest on Variable Exp	*****			873	873	873	873	873	873			
Total Variable Expenses	*****			20,263	20,263	20,263	20,263	20,263	20,263			
Other Expenses												
Building Repair	T			152	152	152	152	152	152			
Property Taxes	L			1,500	1,500	1,500	1,500	1,500	1,500			
Insurance & Licenses	T			452	452	452	452	452	452			
Machinery Depreciation	T	\$32,160		4,020	4,020	4,020	4,020	4,020	4,020			
Building Depreciation	L	\$3,040		380	380	380	380	380	380			
Machinery Investment	T	\$8,040		2,010	2,010	2,010	2,010	2,010	2,010			
Building Investment	L	\$4,560		380	380	380	380	380	380			
Land Investment	L			5,000	5,000	5,000	5,000	5,000	5,000			
Total Other Expenses	*****			13,894	13,894	13,894	13,894	13,894	13,894			
Labour & Management	T			5,384	5,384	5,384	5,384	5,384	5,384			
Total Expenses	*****			39,541	39,541	39,541	39,541	39,541	39,541			
Net Income				-5,865	-5,865	-5,865	-5,865	-5,865	-5,865			
Return (\$/acre)				-14.66	-14.66	-14.66	-14.66	-14.66	-14.66			
Average Return (\$/acre)				-14.66								
Return to Lab and Man (\$/acre)				-1.20	-1.20	-1.20	-1.20	-1.20	-1.20			
Avg Return to Lab and Man (\$/acre)				-1.20								
				\$147,800								
									\$112,600			
NPV (net present value)				\$-147,800	\$5,643	\$5,374	\$5,118	\$4,874	\$4,642	\$4,421	\$4,211	\$80,222
PI (profitability index)				-33.294								
IRR (internal rate of return)				0.77								
				1.1%								

Steers Inc State

ANNUAL INCOME STATEMENT

Steer Operation

Cow-calf Inc State

ANNUAL INCOME STATEMENT Cow-Calf Operation										
YEAR		0	1	2	3	4	5	6	7	8
Land Location	W3									
Revenue										
Animals										
Male Calves		\$0	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988
Heifer Calves		\$0	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218
Nurse Crop		\$44,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue		\$269,542	\$44,588	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206
Expenses	L/T/S	L Share								
Variable Expenses										
Seeding	L	\$7,880	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Established Pasture Costs	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nurse Crop Costs	L	\$32,140	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cows	T									
Feed	T	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130
Bedding	T	\$634	\$634	\$634	\$634	\$634	\$634	\$634	\$634	\$634
Veterinary & Medicine	T	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784
Calves Vet & Med	T	\$172	\$172	\$172	\$172	\$172	\$172	\$172	\$172	\$172
Bulls										
Feed	T	\$472	\$472	\$472	\$472	\$472	\$472	\$472	\$472	\$472
Veterinary & Medicine	T	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270
Death Loss (cows & bulls)	T	\$0	\$828	\$828	\$828	\$828	\$828	\$828	\$828	\$828
Marketing	T	\$1,530	\$180	\$180	\$180	\$180	\$180	\$180	\$180	\$180
Fuel, Lube & Repairs	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Manure Removal	T	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Interest on Variable Exp	****	\$5,046	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397
Miscellaneous	T	\$857	\$857	\$857	\$857	\$857	\$857	\$857	\$857	\$857
Supplements on Pasture	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Variable Expenses	****	\$61,115	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924
Other Expenses										
Facility and Fence Repair	T	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177
Property Taxes	L	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Machinery Depreciation	T	\$0	\$1,015	\$914	\$822	\$740	\$666	\$599	\$539	
Machinery Depreciation	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Building Depreciation	T	\$0	\$267	\$254	\$241	\$229	\$217	\$207	\$196	
Building Depreciation	L	\$0	\$204	\$194	\$184	\$175	\$166	\$158	\$150	
Machinery Investment	T	\$508	\$457	\$411	\$370	\$333	\$300	\$270	\$243	
Building Investment	T	\$471	\$447	\$425	\$404	\$383	\$364	\$346	\$329	
Land Investment	L	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Breeding Herd Investment	T	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900
Breeding Herd Replacement	T	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740
Total Other Expenses	****	\$25,695	\$27,106	\$26,913	\$26,737	\$26,576	\$26,430	\$26,296	\$26,173	
Labour and Management	T	\$5,780	\$5,780	\$5,780	\$5,780	\$5,780	\$5,780	\$5,780	\$5,780	\$5,780
Total Expenses	****	\$92,589	\$49,790	\$49,597	\$49,421	\$49,260	\$49,114	\$48,960	\$48,857	
Net Income		\$47,981	\$8,584	\$8,391	\$8,215	\$8,055	\$7,906	\$7,774	\$7,652	
Return (\$/head)		\$599.77	\$107.30	\$104.69	\$102.69	\$100.68	\$98.65	\$97.18	\$95.64	
Average Return (\$/head)		\$163.38								
Return (\$/acre)		\$119.95	\$21.46	\$20.98	\$20.54	\$20.14	\$19.77	\$19.44	\$19.13	
Average Return (\$/acre)		\$32.68								
Return to Lab and Man (\$/hd)		\$527.77	\$35.30	\$32.89	\$30.69	\$28.68	\$26.85	\$25.18	\$23.64	
Avg ret to Lab and Man (\$/hd)		\$91.38								
Return to Lab and Man (\$/acre)		\$105.55	\$7.06	\$6.58	\$6.14	\$5.74	\$5.37	\$5.04	\$4.73	
Avg ret to Lab and Man (\$/acre)		\$18.28								
		\$100,000	\$114,763							\$206,628
NPV (net present value)		-\$100,000	\$137,968	\$9,710	\$9,248	\$8,807	\$8,386	\$7,968	\$7,608	\$147,100
PI (profitability index)		-39,119								
IRR (internal rate of return)		0.61								
		2.1%								

ANNUAL INCOME STATEMENT											
Forage Operation											
Crop Name			Hay with Nurse	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Breaking	
YEAR		W3	0	1	2	3	4	5	6	7	8
Land Location											
Revenue											
Crop			49,340	17,360	17,360	17,360	17,360	17,360	17,360	9,800	
Total Revenue			137,542	49,340	17,360	17,360	17,360	17,360	17,360	9,800	
Expenses	L/T/S	L Share									
Variable Expenses											
Seed	L	33%		14	0	0	0	0	0	0	0
Fertilizer	Nitrogen	T	33%	0	0	0	0	0	0	0	0
	Phosphorus	T	33%	3600	3600	3600	3600	3600	3600	3600	3600
	Sulfur & other	T	33%	0	0	0	0	0	0	0	0
Chemicals	Herbicides	L	33%	0	0	0	0	0	0	0	0
	Insecticides	L	33%	0	0	0	0	0	0	0	0
	Others	L	33%	0	0	0	0	0	0	0	0
Machinery Op	Fuel	T		0	0	0	0	0	0	0	0
	Repair	T		0	0	0	0	0	0	0	0
Custom Work & Hired Labour	T		11600	10400	10400	10400	10400	10400	10400	10400	13600
Crop Inc Premium	L		2440	0	0	0	0	0	0	0	0
Utilities & Miscellaneous	L		804	832	832	832	832	832	832	832	832
Interest on Variable Exp	*****		831	667	667	667	667	667	667	667	811
Total Variable Expenses	*****		19288	15499	15499	15499	15499	15499	15499	15499	18843
Other Expenses											
Building Repair	L		0	0	0	0	0	0	0	0	0
Property Taxes	L		1900	1900	1900	1900	1900	1900	1900	1900	1900
Insurance & Licenses	L		0	0	0	0	0	0	0	0	0
Machinery Depreciation	T	\$0	0	0	0	0	0	0	0	0	0
Building Depreciation	L	\$80	10	10	10	10	10	10	10	10	10
Machinery Investment	T	\$0	0	0	0	0	0	0	0	0	0
Building Investment	L	\$120	10	10	10	10	10	10	10	10	10
Land Investment	L		5000	5000	5000	5000	5000	5000	5000	5000	5000
Total Other Expenses	*****		6920	6920	6920	6920	6920	6920	6920	6920	6920
Labour & Management	T		4000	4000	4000	4000	4000	4000	4000	4000	4000
Total Expenses	*****		30,208	26,419	26,419	26,419	26,419	26,419	26,419	26,419	29,763
Net Income			19,132	-9,059	-9,059	-9,059	-9,059	-9,059	-9,059	-9,059	-19,963
Return (\$/acre)			47.83	-22.65	-22.65	-22.65	-22.65	-22.65	-22.65	-22.65	-49.91
Average Return (\$/acre)			-17.25								
Return to Labour and Mgmt (\$/acre)			57.83	-12.65	-12.65	-12.65	-12.65	-12.65	-12.65	-12.65	-39.91
Avg Return to Lab and Man (\$/acre)			-7.25								
				Mach \$0							
			\$100,200	Building \$200							\$100,120
NPV (net present value)			-\$100,200	\$23,002	-\$3,664	-\$3,489	-\$3,323	-\$3,165	-\$3,014	-\$2,871	\$57,651
PI (profitability index)											
IRR (internal rate of return)											

Tenant and Landlord Contribution

Expenses by	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063	\$28,478	\$11,063
Percent Contributed	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%
Steers	\$5,777	\$48,721	\$58,973	\$7,020	\$88,947	\$7,020	\$88,923	\$7,020	\$88,901	\$7,020	\$88,881	\$7,020	\$88,862	\$7,020	\$88,845	\$7,020
Percent Contributed	11%	89%	9%	7%	9%	7%	9%	7%	9%	7%	9%	7%	9%	7%	9%	7%
Cow-Calf	\$80,842	\$57,422	\$82,860	\$13,800	\$82,323	\$13,800	\$81,990	\$13,800	\$81,687	\$13,800	\$81,411	\$13,800	\$81,180	\$13,800	\$80,931	\$13,800
Percent Contributed	5%	49%	92%	59%	62%	69%	67%	69%	67%	69%	67%	69%	67%	69%	67%	69%
Hay	\$19,884	\$10,324	\$18,830	\$7,788	\$18,830	\$7,788	\$18,830	\$7,788	\$18,830	\$7,788	\$18,830	\$7,788	\$18,830	\$7,788	\$21,974	\$7,788
Percent Contributed	89%	34%	71%	39%	71%	29%	71%	29%	71%	29%	71%	29%	71%	29%	74%	29%

Interest on Variable Expenses

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184	\$ 708	\$ 184
Steers	\$ -	\$ 1,801	\$ 3,285	\$ -	\$ 3,285	\$ -	\$ 3,285	\$ -	\$ 3,285	\$ -	\$ 3,285	\$ -	\$ 3,285	\$ -	\$ 3,285	\$ -
Cow-Calf	\$ 1,444	\$ 3,802	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -
Hay	\$ 684	\$ 147	\$ 630	\$ 37	\$ 630	\$ 37	\$ 630	\$ 37	\$ 630	\$ 37	\$ 630	\$ 37	\$ 630	\$ 37	\$ 774	\$ 37

Total Contribution

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226	\$ 29,187	\$ 11,226
Percent Contributed	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%
Steers	\$ 5,777	\$ 50,522	\$ 60,238	\$ 7,020	\$ 90,212	\$ 7,020	\$ 90,188	\$ 7,020	\$ 90,166	\$ 7,020	\$ 90,144	\$ 7,020	\$ 90,127	\$ 7,020	\$ 90,110	\$ 7,020
Percent Contributed	10%	89%	93%	7%	85%	7%	85%	7%	85%	7%	85%	7%	85%	7%	85%	7%
Cow-Calf	\$ 82,287	\$ 81,024	\$ 84,086	\$ 13,800	\$ 83,720	\$ 13,800	\$ 83,386	\$ 13,800	\$ 83,053	\$ 13,800	\$ 82,809	\$ 13,800	\$ 82,566	\$ 13,800	\$ 82,329	\$ 13,800
Percent Contributed	5%	49%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%
Hay	\$20,588	\$10,471	\$10,260	\$7,827	\$10,260	\$7,827	\$10,260	\$7,827	\$10,260	\$7,827	\$10,260	\$7,827	\$10,260	\$7,827	\$22,748	\$7,827
Percent Contributed	89%	34%	71%	29%	71%	29%	71%	29%	71%	29%	71%	29%	71%	29%	74%	29%

	Tenant	Landlord
Crops	72.2%	27.8%
Steers	81.0%	19.0%
Cow-Calf	77.6%	22.4%
Hay	70.9%	29.1%

Crops

	Tenant		Landlord		Total	Tenant %	Landlord %
	Tenant	Landlord	Tenant	Landlord			
Initial Investment	\$ -	\$ 34,800	\$ -	\$ 113,200	\$ 147,800	23%	77%
Year 1	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 2	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 3	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 4	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 5	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 6	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 7	\$ -	\$ 22,448	\$ -	\$ 5,303	\$ 27,751	81%	19%
Year 8	\$ -	\$ 14,408	\$ -	\$ 9,257	\$ 24,649	-17%	117%
NPV of Costs	\$ -	\$ 174,244	\$ -	\$ 78,702	\$ 250,946	65%	35%
					\$217,661		
					\$333,294		

Steers

	Tenant		Landlord		Total	Tenant %	Landlord %
	Tenant	Landlord	Tenant	Landlord			
Initial Investment	\$ -	\$ 1,200	\$ -	\$ 104,800	\$ 105,800	1%	99%
Year 1	\$ -	\$ 5,384	\$ -	\$ 43,721	\$ 49,105	11%	89%
Year 2	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 3	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 4	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 5	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 6	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 7	\$ -	\$ 6,808	\$ -	\$ 2,020	\$ 8,829	68%	22%
Year 8	\$ -	\$ 8,003	\$ -	\$ 101,032	\$ 14,936	-57%	97%
NPV	\$ -	\$ 483,267	\$ -	\$ 87,821	\$ 570,888	65%	35%
					\$564,096		
					\$13,191		

Cow-Calf

	Tenant		Landlord		Total	Tenant %	Landlord %
	Tenant	Landlord	Tenant	Landlord			
Initial Investment	\$ -	-	\$ 100,000	-	\$ 100,000	0%	100%
Year 1	\$ -	\$ 13,858	\$ -	\$ 49,586	\$ 188,454	74%	26%
Year 2	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 3	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 4	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 5	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 6	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 7	\$ -	\$ 28,800	\$ -	\$ 1,900	\$ 30,500	94%	6%
Year 8	\$ -	\$ 75,183	\$ -	\$ 100,945	\$ 178,128	43%	57%
NPV	\$ -	\$ 220,566	\$ -	\$ 86,096	\$ 306,661	71%	29%
					\$298,942		
					\$-30,110		

Hay

	Tenant		Landlord		Total	Tenant %	Landlord %
	Tenant	Landlord	Tenant	Landlord			
Initial Investment	\$ -	-	\$ 100,200	-	\$ 100,200	0%	100%
Year 1	\$ -	\$ 19,884	\$ -	\$ 5,304	\$ 25,188	79%	21%
Year 2	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 3	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 4	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 5	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 6	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 7	\$ -	\$ 18,630	\$ -	\$ 2,788	\$ 21,388	87%	13%
Year 8	\$ -	\$ 21,974	\$ -	\$ 87,381	\$ 75,377	-2%	128%
NPV	\$ -	\$ 123,887	\$ -	\$ 52,740	\$ 178,616	70%	30%
					\$137,842		
					\$-30,074		

7.2 Appendix B – Enterprise Input and Output – Dark Brown Soil Zone

	0	1	2	3	4	5	6	7	8
YEAR									
Soil Zone (1=brown, 2=dark brown, 3=black)	0	1	2	3	4	5	6	7	8
Land Location	W3								
Parcel 1									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation		24	14	20	17	24	14	20	17
Crop Name		Canola stubble	Spring Wheat stubble	Lentil stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Lentil stubble	Feed Barley stubble
Parcel 2									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation		14	20	17	24	14	20	17	24
Crop Name		Spring Wheat stubble	Lentil stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Lentil stubble	Feed Barley stubble	Canola stubble
Parcel 3									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation		20	17	24	14	20	17	24	14
Crop Name		Lentil stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Lentil stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble
Parcel 4									
Number of Acres	100								
Land Cost (\$/acre)	250								
Crop Rotation		17	24	14	20	17	24	14	20
Crop Name		Feed Barley stubble	Canola stubble	Spring Wheat stubble	Lentil stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Lentil stubble
Parcel 5									
Number of Acres									
Land Cost (\$/acre)									
Crop Rotation		250							
Crop Name		20	14	Tillage Fallow	1	22	14	Tillage Fallow	1
		Lentil stubble	Spring Wheat stubble		Mustard stubble	Spring Wheat stubble		Lentil stubble	Spring Wheat stubble
Total Number of Acres	400								
Financial Info									
Discount Rate	5%								
Int Rate on Op Loan	9%								
Building Repair Rate	2%								
Machinery Depreciation Rate	10%								
Building Depreciation Rate	5%								
Inv Cost on Mach and Buildings	5%								
Inv Cost on Land	5%								

	1	2	3	4	5	6	7	8	9
	Tillage Fallow	Chem Fallow	Spring Wheat	Durum Wheat	CPS Wheat	Feed Barley	Feed Oats	Fallow Seeded	
									Lentil
Revenue per Acre									
Most Likely yield (bu./lb./ac)	0.0	0.0	33.7	34.8	40.9	54.9	0.0	21.8	1330.8
Most Likely Farm Price (\$/bu., lb.)	0.00	0.00	4.03	3.88	3.48	2.07	0.00	8.10	0.17
	1	2	3	4	5	6	7	8	9
	Tillage Fallow	Chem Fallow	FS Spring Wheat	FS Durum Wheat	FS CPS Wheat	FS Feed Barley	FS Feed Oats	Fallow Seeded	
									Lentil
EXPENSES PER ACRE									
Variable Expenses/acre									
Seed	0.00	0.00	6.88	12.45	7.50	5.78	0.00	6.30	16.20
Fertilizer	Nitrogen	0.00	0.00	6.00	6.00	6.00	0.00	6.00	1.20
	Phosphorus	0.00	0.00	7.00	7.00	7.00	0.00	7.00	7.00
	Sulfur & other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemicals	Herbicides	2.93	14.79	14.50	14.50	14.50	14.23	0.00	19.88
	Insecticides	0.00	0.00	1.20	1.20	1.20	0.00	0.00	2.13
	Others	0.00	0.00	1.65	1.98	1.98	1.74	0.00	0.77
Machinery Op	Fuel	3.70	0.74	6.29	6.29	6.29	0.00	7.03	7.03
	Repair	2.90	2.05	7.25	7.25	7.25	0.00	8.70	10.50
Custom Work & Hired Labour	1.50	0.00	5.25	5.25	5.25	4.25	0.00	4.25	3.00
Crop Ins Premium	0.00	0.00	3.67	4.36	5.40	5.38	0.00	6.16	13.81
Utilities & Miscellaneous	2.97	2.97	2.97	2.97	2.97	2.97	0.00	2.97	2.97
Interest on Variable Exp	1.36	2.00	2.04	2.25	2.12	1.98	0.00	2.24	3.33
Other Expenses (Meals)									
Property Taxes	4.25	4.25	4.25	4.25	4.25	4.25	0.00	4.25	4.25
Insurance & Licenses	1.60	1.60	1.60	1.60	1.60	1.60	0.00	1.60	1.60
Labour & Management	19.00	19.00	19.00	19.00	19.00	19.00	0.00	19.00	19.00
Value of Investment									
Machinery	58.00	41.00	145.00	145.00	145.00	145.00	0.00	145.00	175.00
Building	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00

Input for Steer Optimization

Financial Information (Livestock)	(see help)
Discount Rate	
Int Rate on Op Loan	
Building Repair Rate	
Machinery Depreciation Rate	
Building Depreciation Rate	
Inv Cost on Mach and Buildings	
Inv Cost on Land	

Land Information (Shears)	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5
Number of Acres	100	100	100	100	100
Stocking Rate (AUM/Acre)	1.2	1.2	1.2	1.2	1.2
Land Cost (\$/Acre)	250	250	250	250	250
Property Tax (\$/Acre)	4.75	4.75	4.75	4.75	4.75
Nurse Crop (1 for Yes, 0 for No)	1	1	1	1	1
Area of Province (N-North, S-South)	S				
Length of Grazing Period	6	6	6	6	6
Animal Unit Months	120	120	120	120	120
Animals Grazed on Parcel	30	30	30	30	30

Grazing Information (Sheep)

Grazing Information (cont'd.)

Pasture seeding required (1 for Yes, 0 for No)

Total Number of Acres

Total Animal Unit Months

Steers Grazed on Above

Capital Value	Initial Capital Investment (amount for steer operation only)	0	1	2	3	4	5	6	7	8
Tenant Cont'n (machinery, etc)	1200.00	1200.00	1080.00	972.00	874.80	787.32	708.56	637.73	573.96	516.56
Landlord Cont'n (machinery, etc)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tenant Cont'n (fences, water, etc)	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ldfrd Cont'n(fence water chute etc.)	4800.00	4800.00	4370.00	4151.50	3943.93	3746.73	3558.39	3361.42	3212.35	3051.73
Total Capital Investment	5800.00	5800.00	5450.00	5123.50	4818.73	4524.05	4237.98	3951.15	3764.31	3588.20

Seeding (\$/acre)							
1 - fertilizer spreader	0.5	0	0	0	0	0	0
1 - 20' press drill	2.7	0	0	0	0	0	0
Afalfa seed (2 lbs/acre)	3.6	0	0	0	0	0	0
Crested W seed (3 lbs/acre)	3.9	0	0	0	0	0	0
Fertilizer (30 lbs/acre, \$3/lb)	9	0	0	0	0	0	0
Total Cost	\$20	\$0	\$0	\$0	\$0	\$0	\$0

Interest
Interest on Operating (\$/share) 15.01 27.20 27.20 27.20 27.20 27.20 27.20 27.20

Labour and Management
Labour and Man (Sister) 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00

YEAR	Input Sheet Input for Cow-Calf Operation							
	0	1	2	3	4	5	6	7
Financial Information (Cow-Calf)								
Discount Rate	5%							
Int Rate on Op Loan	9%							
Building Repair Rate	2%							
Machinery Depreciation Rate	10%							
Building Depreciation Rate	5%							
Inv Cost on Mach and Buildings	5%							
Inv Cost on Land	5%							
Land Information (Cow-Calf)								
Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres	100	100	100	100	0			
Stocking Rate (AUM/acre)	1.2	1.2	1.2	1.2	1.2			
Land Cost (\$/acre)	250	250	250	250	250			
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75			
Nurse Crop (1 for Yes, 0 for No)	1	1	1	1	1			
Length of Grazing Period	5	5	5	5	5			
Animal Unit Months	120	120	120	120	0			
Animals Grazed on Parcel	20	20	20	20	0			
Grazing Information (Cows)								
Pasture seeding required (1 for Yes, 0 for No)	1							
Total Number of Acres	400							
Total Animal Unit Months	480							
Cows grazed on above land	80							
Nurse Crop Revenue								
Nurse Crop Yield (t, bu/acre)	31.4							
Nuse Crop Price (\$/t/bu)	3.55							
Total Revenue (\$/acre)	111.47							
Cows								
Avg Weight (lbs)	0	1200	1200	1200	1200	1200	1200	1200
Value of New Cow	0	1100	1100	1100	1100	1100	1100	1100
Cull Cow	0	700	700	700	700	700	700	700
Death loss of cows	0	1%	1%	1%	1%	1%	1%	1%
Cow replace rate	0	12%	12%	12%	12%	12%	12%	12%
Bulls								
# of cows required for one bull	0	30	30	30	30	30	30	30
# of bulls required	0	3	3	3	3	3	3	3
Value of new bull	\$0	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Value of cull bull	\$0	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Useful life of bull (years)	0	4	4	4	4	4	4	4
Death loss of bulls	0%	2%	2%	2%	2%	2%	2%	2%
Calves								
Male Calf price (\$/lb)	\$0.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Female Calf price (\$/lb)	\$0.00	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Calving percent	0%	94%	94%	94%	94%	94%	94%	94%
Post calving death loss	0%	4%	4%	4%	4%	4%	4%	4%
Weaning per cent	0%	90%	90%	90%	90%	90%	90%	90%
Average Weaning Wts (lb)								
Weaning wt of steers	0	550	550	550	550	550	550	550
Weaning wt of heifers	0	520	520	520	520	520	520	520
Other Production Info								
Winter feeding period (days)	0	180	180	180	180	180	180	180
Fence & Mach Repair Rate	0%	2%	2%	2%	2%	2%	2%	2%
Prices								
Hay price (\$/tonne)	\$0.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Barley price (\$/tonne)	\$0.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00
Straw price (\$/tonne)	\$0.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Salt (\$/kg)	\$0.00	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18
1:1 trace mineral (\$/kg)	\$0.00	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54
Protein Supplement (\$/kg)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Investment								
Buildings and handling fac								
Tenant Contribution (corrals, sheds, fences, etc.)	5339							
Landlord Contribution (fences, water requirements, etc.)	4074							

Input Sheet

Total Value of fence and bldgs	9413								
Equipment for Cow-Calf	10150								
Tenant Contribution (tractor, loader, mixer, etc.)									
Landlord Contribution (Seeder, etc)	0								
Total Equipment	10150								
Land Value	100000								
Value of Cows purchased	88000.00								
Value of Bulls purchased	7200								
Total Capital Investment	214763.00								
YEAR	0	1	2	3	4	5	6	7	8
Cows									
Feed									
Hay									
Tonnes/cow/day	0	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139
Tonnes/cow/period	0	2.502	2.502	2.502	2.502	2.502	2.502	2.502	2.502
Hay Cost (\$/cow)	0	100.06	100.06	100.06	100.06	100.06	100.06	100.06	100.06
Barley									
Tonnes/cow/day	0	0	0	0	0	0	0	0	0
Tonnes/cow/period	0	0	0	0	0	0	0	0	0
Barley Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Salt									
Kg/cow/period	0	12	12	12	12	12	12	12	12
Salt cost (\$/cow)	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Mineral									
Kg/cow	0	22	22	22	22	22	22	22	22
Mineral Cost (\$/cow)	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Protein									
Kg/cow/period	0	0	0	0	0	0	0	0	0
Protein Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Total Feed Cost (\$/cow)	0	114.12	114.12	114.12	114.12	114.12	114.12	114.12	114.12
Bedding									
Tonnes/animal/day	0	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022
Tonnes/animal	0	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396
Bedding cost (\$/cow)	0	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92
Veterinary and Medicine									
IBR,BVD,PI3 & BRSV	0	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
Scour vaccine	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Ivermec	0	9	9	9	9	9	9	9	9
ADE (2 treatments)	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fly tag	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Medicine Cost (\$/cow)	0	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84
Veterinary Cost (\$/cow)	0	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Vet & Med C (\$/cow)	0	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
Vet & Med Cost (calves)									
Blackleg	0	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Flytag	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Medicine Cost (\$/calve)	0	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39
Bulls									
Feed									
Hay									
Tonnes/bull/day	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Tonnes/bull/period	0	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Hay cost (\$/bull)	0	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2
Barley									
Tonnes/bull/day	0	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Tonnes/bull/period	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Barley Cost (\$/bull)	0	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
Salt & Minerals									
Salt cost (\$/bull)	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Mineral cost (\$/bull)	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Protein									
Kg/bull/period	0	Page 20	0	0	0	0	0	0	0

Protein Cost (\$/buft)	0	Input Shelt	0	0	0	0	0	0	0
Total Feed Cost (\$/buft)	0	157.44	157.44	157.44	157.44	157.44	157.44	157.44	157.44
Vet & Med									
Veterinary exam (\$/buft)	0	20	20	20	20	20	20	20	20
Semen test	0	60	60	60	60	60	60	60	60
Veterinary cost	0	10	10	10	10	10	10	10	10
Vet & Med cost (\$/buft)	0	90	90	90	90	90	90	90	90
Trucking	0.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Selling commission (\$/hd)	0.00	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75
Total costs (\$/hd)	0.00	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75
Facility and Fence (\$/hd)	0.00	14.71	14.71	14.71	14.71	14.71	14.71	14.71	14.71
Manure Removal (\$/hd)	0.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Interest on Op Loan (\$/hd)	0.00	63.08	17.47	17.47	17.47	17.47	17.47	17.47	17.47
Miscellaneous (\$/hd)	0.00	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Supplements on Pct (\$/hd)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery Dep (\$/hd)	0.00	-126.88	12.69	11.42	10.28	9.25	8.32	7.49	6.64
Building Dep (\$/hd)	0.00	0.00	5.88	5.59	5.31	5.04	4.79	4.55	4.32
Machinery Inv (\$/hd)	0.00	12.69	11.42	10.28	9.25	8.32	7.49	6.64	5.85
Building Investment (\$/hd)	0.00	0.59	11.18	10.62	10.09	9.58	9.10	8.65	8.11
Land Investment (\$/hd)	0.00	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50
Breeding Herd Investment (\$/hd)	0.00	148.75	148.75	148.75	148.75	148.75	148.75	148.75	148.75
Breeding Herd Replacement	0.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00
Labour and Management (\$/hd)	0.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00
Seeding (\$/acre)									
1 - fertilizer spreader		0.50							
1 - 20' press drill		2.70							
Affalfa seed (2 lbs/ac)		3.60							
Crested W seed (3 lbs/ac)		3.90							
Fertilizer (30 lbs/ac, \$3/lb)		9.00							
Total Cost		19.70							
Established Pasture Costs									
Fertilizer Cost (\$/acre)		0							
1 - 40' fertilizer spreader		0.00							
Total Yearly Pasture Costs (\$/acre)		0.00							
Nurse Crop Costs (\$/acre)									
Seed, Fertilizer, Herbicide		48.91							
Machinery Fuel and Repair		21.65							
Other		9.79							
Total Nurse Crop Costs		80.35							
YEAR	0	1	2	3	4	5	6	7	8
Capital Value									
Buildings and handling fac:									
Tenant Contribution (corrals, sheds, fences, etc.)	0	5339	5072	4818	4578	4349	4131	3925	3728
Tenant Depreciation	0	0.00	\$3.34	\$3.17	\$3.01	\$2.88	\$2.72	\$2.58	\$2.45
Landlord Contribution (fences, water requirements, etc.)	0	4074	3870	3677	3493	3318	3152	2995	2845
Landlord Depreciation	0	0.00	\$2.55	\$2.42	\$2.30	\$2.18	\$2.07	\$1.97	\$1.87
Total Value of fence and bldgs	0	9413	8942	8495	8070	7667	7284	6919	6573
Equipment for Cow-Calf									
Tenant Contribution (tractor, loader, mcmill, etc.)	0	10150	9135	8222	7389	6659	5993	5394	4855
Tenant Depreciation	0	0.00	12.69	11.42	10.28	9.25	8.32	7.49	6.74
Landlord Contribution (Seeder, etc.)	0	0	0	0	0	0	0	0	0
Landlord Depreciation	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Equipment	0	10150	9135	8222	7389	6659	5993	5394	4855
Land Value	100000								100000
Value of Cows purchased	0	88000							88000
Value of Bulls purchased	0	7200							7200
Total Tenant Capital Invested	0	110689							103,783
Total Landlord Capital Invested	100000	4074							\$102,845
Total Capital Invested	100000	114763							206,628

Input Sheet

Input for Forage Operation

YEAR	0	1	2	3	4	5	6	7	8
Soil Zone (1=brown, 2=dark brown, 3=black)			2						
Land Location	W3								
Land Information (Forage)	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres	100	100	100	100	0				
Land Cost (\$/acre)	250	250	250	250	250				
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75				
Total Number of Acres		400							
Nurse Crop Required (0=No, 1=Yes)		1							
Financial Info									
Discount Rate		5%							
Int Rate on Op Loan		9%							
Building Repair Rate		2%							
Machinery Depreciation Rate		10%							
Building Depreciation Rate		5%							
Inv Cost on Mach and Buildings		5%							
Inv Cost on Land		5%							
Forage Revenue									
	36 Hay Seed Year no Nurse	37 Hay Seed Year Nurse	38 Hay Estab	39 Hay Breaking Year					
Revenue per Acre									
Estimated yield (bu./lb./ac)		0.00	33.7	1.25	0.71				
Farm Price (\$/bu., lb.)		0.00	4.03	70.00	70.00				
Forage Expenses									
	Hay no Nurse	Hay with Nurse	Hay Estab	Hay Breaking					
EXPENSES PER ACRE									
Variable Expenses (\$/acre)									
Seed		19.80	26.88	0.00	0.00				
Fertilizer	Nitrogen	0.00	15.00	0.00	0.00				
	Phosphorus	10.00	10.00	10.00	10.00				
	Sulfur & other	0.00	0.00	0.00	0.00				
Chemicals	Herbicides	0.00	15.00	0.00	0.00				
	Insecticides	0.00	0.00	0.00	0.00				
	Others	0.00	0.00	0.00	0.00				
Machinery Op	Fuel	0.00	0.00	0.00	0.00				
	Repair	0.00	0.00	0.00	0.00				
Custom Work & Hired Labour		40.00	40.00	29.00	43.00				
Crop Ins Premium		0.00	6.05	0.00	0.00				
Utilities & Miscellaneous		2.08	2.08	2.08	2.08				
Interest on Variable Exp		3.23	5.43	1.85	2.48				
Other Expenses (\$/acre)									
Property Taxes		0.00	0.00	0.00	0.00				
Insurance & Licenses		0.00	0.00	0.00	0.00				
Labour & Management		10.00	10.00	10.00	10.00				
Value of Investment									
Machinery		0.00	0.00	0.00	0.00				
Building		0.50	0.50	0.50	0.50				

ANNUAL INCOME STATEMENT											
Cropping Operation											
YEAR			0	1	2	3	4	5	6	7	8
Land Location		W3									
Revenue											
Crop			51,672	51,672	51,672	51,672	51,672	51,672	51,672	51,672	51,672
Total Revenue		\$333,964	0	51,672	51,672	51,672	51,672	51,672	51,672	51,672	51,672
Expenses	L/T/S	L Share									
Variable Expenses											
Seed	S	33%	3,486	3,486	3,486	3,486	3,486	3,486	3,486	3,486	3,486
Fertilizer	Nitrogen	S	33%	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960
	Phosphorus	S	33%	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800
	Sulfur & other	S	33%	405	405	405	405	405	405	405	405
Chemicals	Herbicides	S	33%	8,132	8,132	8,132	8,132	8,132	8,132	8,132	8,132
	Insecticides	S	33%	460	460	460	460	460	460	460	460
	Others	S	33%	834	834	834	834	834	834	834	834
Machinery	Fuel	T		3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071
	Repair	T		3,225	3,225	3,225	3,225	3,225	3,225	3,225	3,225
Custom Work & Hired Labour		T		1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675
Crop Ins Premium		T		2,477	2,477	2,477	2,477	2,477	2,477	2,477	2,477
Utilities & Miscellaneous		T		1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188
Interest on Variable Exp	*****			1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427
Total Variable Expenses	*****			33,140	33,140	33,140	33,140	33,140	33,140	33,140	33,140
Other Expenses											
Building Repair	T			184	184	184	184	184	184	184	184
Property Taxes	L			1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Insurance & Licenses	T			640	640	640	640	640	640	640	640
Machinery Depreciation	T	\$48,800	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100
Building Depreciation	L	\$3,680	460	460	460	460	460	460	460	460	460
Machinery Investment	T	\$12,200	3,050	3,050	3,050	3,050	3,050	3,050	3,050	3,050	3,050
Building Investment	L	\$5,520	460	460	460	460	460	460	460	460	460
Land Investment	L		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Other Expenses	*****			17,594	17,594	17,594	17,594	17,594	17,594	17,594	17,594
Labour & Management	T			7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600
Total Expenses	*****			58,334	58,334	58,334	58,334	58,334	58,334	58,334	58,334
Net Income				-6,663	-6,663	-6,663	-6,663	-6,663	-6,663	-6,663	-6,663
Return (\$/acre)				-16.66	-16.66	-16.66	-16.66	-16.66	-16.66	-16.66	-16.66
Average Return (\$/acre)				-16.66							
Return to Lab and Man (\$/acre)				2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
Avg Return to Lab and Man (\$/acre)				2.34							
			\$170,200								\$117,720
			\$170,200	\$8,007	\$7,626	\$7,263	\$6,917	\$6,587	\$6,274	\$5,975	\$85,368
NPV (net present value)				-36,183							
PI (profitability index)				0.79							
IRR (internal rate of return)				1.3%							

Steers Inc State

ANNUAL INCOME STATEMENT

Steer Operation

YEAR		0	1	2	3	4	5	6	7	8
Land Location	W3									
Revenue										
Nurse Crop		\$44,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Steers		\$0	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280
Total Revenue		\$584,069	\$44,588	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280
Expenses	L/T/S L Share									
Variable Expenses										
Seeding	L 0%	\$7,880	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Established Pasture Costs	L 0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nurse Crop Costs	L 0%	\$32,140	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Steer Cost	T	\$0	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020
Death Loss	T	\$0	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320
Vet and Medicine	T	\$0	\$738	\$738	\$738	\$738	\$738	\$738	\$738	\$738
Marketing	T	\$0	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784
Fuel, Lube & Repairs	T	\$0	\$360	\$360	\$360	\$360	\$360	\$360	\$360	\$360
Interest on Variable Exp	*****	\$1,801	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265
Miscellaneous & Utilities	T	\$0	\$1,260	\$1,260	\$1,260	\$1,260	\$1,260	\$1,260	\$1,260	\$1,260
Supplements on Pasture	T	\$0	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063
Total Variable Costs	*****	\$41,821	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809
Other Expenses										
Fence Repair	L	\$0	\$120	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Property Taxes	L	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Machinery Depreciation - Tenant	T	\$120	\$108	\$97	\$87	\$79	\$71	\$64	\$57	
Machinery Depreciation - Landlord	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Depreciation - Tenant	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Depreciation - Landlord	L	\$230	\$219	\$208	\$197	\$187	\$178	\$169	\$161	
Machinery Investment	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Investment	T	\$273	\$256	\$241	\$227	\$213	\$201	\$189	\$178	
Land Investment	L	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Total Other Expenses	*****	\$7,523	\$7,603	\$7,566	\$7,531	\$7,499	\$7,470	\$7,442	\$7,416	
Labour and Management	T	\$7,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800
Total Costs	*****	\$56,943	\$94,212	\$94,175	\$94,141	\$94,109	\$94,079	\$94,051	\$94,026	
Net Income		-\$12,355	\$4,068	\$4,105	\$4,139	\$4,171	\$4,201	\$4,229	\$4,254	
Return (\$/head)		-\$103	\$34	\$34	\$34	\$35	\$35	\$35	\$35	\$35
Average Return (\$/head)		\$18								
Return (\$/acre)		-\$31	\$10	\$10	\$10	\$10	\$11	\$11	\$11	\$11
Average Return (\$/acre)		\$5.25								
Return to Lab and Man (\$/acre)		-\$12	\$37	\$37	\$37	\$37	\$38	\$38	\$38	\$38
Avg Return to Lab and Man (\$/acre)		\$31								
		\$105,800								\$103,568
NPV (net present value)		-\$105,800	-\$6,412	\$8,753	\$8,337	\$7,940	\$7,562	\$7,201	\$6,859	\$76,631
PI (profitability index)		11,070								
IRR (internal rate of return)		1.10								
		7.0%								

ANNUAL INCOME STATEMENT Cow-Calf Operation										
YEAR		0	1	2	3	4	5	6	7	8
Land Location	W3									
Revenue										
Animals										
Male Calves		\$0	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988
Heifer Calves		\$0	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218
Nurse Crop		\$44,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue		\$269,542	\$44,588	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206
Expenses	L/T/S	L Share								
Variable Expenses										
Seeding	L		\$7,880	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Established Pasture Costs	L		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nurse Crop Costs	L		\$32,140	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cows	T									
Feed	T		\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130
Bedding	T		\$634	\$634	\$634	\$634	\$634	\$634	\$634	\$634
Veterinary & Medicine	T		\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784
Calves Vet & Med	T		\$172	\$172	\$172	\$172	\$172	\$172	\$172	\$172
Bulls										
Feed	T		\$472	\$472	\$472	\$472	\$472	\$472	\$472	\$472
Veterinary & Medicine	T		\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270
Death Loss (cows & bulls)	T		\$0	\$828	\$828	\$828	\$828	\$828	\$828	\$828
Marketing	T		\$1,530	\$180	\$180	\$180	\$180	\$180	\$180	\$180
Fuel, Lube & Repairs	T		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Manure Removal	T		\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Interest on Variable Exp	****		\$5,046	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397
Miscellaneous	T		\$857	\$857	\$857	\$857	\$857	\$857	\$857	\$857
Supplements on Pasture	T		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Variable Expenses	****		\$61,115	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924
Other Expenses										
Facility and Fence Repair	T		\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177
Property Taxes	L		\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Machinery Depreciation	T		\$0	\$1,015	\$914	\$822	\$740	\$666	\$599	\$539
Machinery Depreciation	L		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Depreciation	T		\$0	\$267	\$254	\$241	\$229	\$217	\$207	\$196
Building Depreciation	L		\$0	\$204	\$194	\$184	\$175	\$166	\$158	\$150
Machinery Investment	T		\$508	\$457	\$411	\$370	\$333	\$300	\$270	\$243
Building Investment	T		\$471	\$447	\$425	\$404	\$383	\$364	\$346	\$329
Land Investment	L		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Breeding Herd Investment	T		\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900
Breeding Herd Replacement	T		\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740
Total Other Expenses	****		\$25,695	\$27,106	\$26,913	\$26,737	\$26,576	\$26,430	\$26,296	\$26,173
Labour and Management	T		\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760
Total Expenses	****		\$92,569	\$49,790	\$49,597	\$49,421	\$49,260	\$49,114	\$48,960	\$48,857
Net Income			-\$47,981	-\$8,584	-\$8,391	-\$8,215	-\$8,055	-\$7,908	-\$7,774	-\$7,652
Return (\$/head)			-\$599.77	-\$107.30	-\$104.89	-\$102.69	-\$100.68	-\$98.85	-\$97.18	-\$95.64
Average Return (\$/head)			-\$163.38							
Return (\$/acre)			-\$119.95	-\$21.46	-\$20.98	-\$20.54	-\$20.14	-\$19.77	-\$19.44	-\$19.13
Average Return (\$/acre)			-\$32.68							
Return to Lab and Man (\$/hd)			-\$527.77	-\$35.30	-\$32.89	-\$30.69	-\$28.68	-\$26.85	-\$25.18	-\$23.64
Avg ret to Lab and Man (\$/hd)			-\$91.38							
Return to Lab and Man (\$/acre)			-\$105.55	-\$7.06	-\$6.58	-\$6.14	-\$5.74	-\$5.37	-\$5.04	-\$4.73
Avg ret to Lab and Man (\$/acre)			-\$18.28							
		\$100,000	\$114,763							\$206,628
		-\$100,000	-\$137,968	\$9,710	\$9,248	\$8,807	\$8,388	\$7,988	\$7,608	\$147,100
NPV (net present value)			-39,119							
PI (profitability index)			0.61							
IRR (internal rate of return)			2.1%							

Hay Inc State

ANNUAL INCOME STATEMENT											
Crop Name			Forage Operation								
			Hay with Nurse	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Breaking	
YEAR		W3	0	1	2	3	4	5	6	7	8
Land Location											
Revenue											
Crop			54,324	35,000	35,000	35,000	35,000	35,000	35,000	19,880	
Total Revenue			234,383	54,324	35,000	35,000	35,000	35,000	35,000	19,880	
Expenses	L/T/S	L Share									
Variable Expenses											
Seed	L	33%	27	0	0	0	0	0	0	0	
Fertilizer	Nitrogen	T	33%	15	0	0	0	0	0	0	
	Phosphorus	T	33%	4000	4000	4000	4000	4000	4000	4000	4000
	Sulfur & other	T	33%	0	0	0	0	0	0	0	
Chemicals	Herbicides	L	33%	6000	0	0	0	0	0	0	
	Insecticides	L	33%	0	0	0	0	0	0	0	
	Others	L	33%	0	0	0	0	0	0	0	
Machinery Op	Fuel	T		0	0	0	0	0	0	0	
	Repair	T		0	0	0	0	0	0	0	
Custom Work & Hired Labour	T		16000	11600	11600	11600	11600	11600	11600	17200	
Crop Ins Premium	L		2420	0	0	0	0	0	0	0	
Utilities & Miscellaneous	L		832	832	832	832	832	832	832	832	
Interest on Variable Exp	*****		1318	739	739	739	739	739	739	991	
Total Variable Expenses	*****		30612	17171	17171	17171	17171	17171	17171	23023	
Other Expenses											
Building Repair	L		0	0	0	0	0	0	0	0	
Property Taxes	L		1900	1900	1900	1900	1900	1900	1900	1900	
Insurance & Licenses	L		0	0	0	0	0	0	0	0	
Machinery Depreciation	T	\$0	0	0	0	0	0	0	0	0	
Building Depreciation	L	\$80	10	10	10	10	10	10	10	10	
Machinery Investment	T	\$0	0	0	0	0	0	0	0	0	
Building Investment	L	\$120	10	10	10	10	10	10	10	10	
Land Investment	L		5000	5000	5000	5000	5000	5000	5000	5000	
Total Other Expenses	*****		6920	6920	6920	6920	6920	6920	6920	6920	
Labour & Management	T		4000	4000	4000	4000	4000	4000	4000	4000	
Total Expenses	*****		41,532	28,091	28,091	28,091	28,091	28,091	28,091	33,943	
Net Income			12,793	6,909	6,909	6,909	6,909	6,909	6,909	-14,063	
Return (\$/acre)			31.98	17.27	17.27	17.27	17.27	17.27	17.27	-35.16	
Average Return (\$/acre)			12.56								
Return to Labour and Mgmt (\$/acre)			41.98	27.27	27.27	27.27	27.27	27.27	27.27	-25.16	
Avg Return to Lab and Man (\$/acre)			22.56								
				Mach	\$0						
			\$100,200	Building	\$200					\$100,120	
NPV (net present value)			-\$100,200	\$16,964	\$10,820	\$10,304	\$9,814	\$9,346	\$8,901	\$8,477	\$61,644
PI (profitability index)			\$36,071								
IRR (internal rate of return)			1.36								
			11.2%								

Contribution

Tenant and Landlord Contribution

Expenses for Crop	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544	\$43,791	\$14,544
Percent Contributed	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%
Steers	\$7,983	\$48,721	\$86,973	\$7,020	\$86,947	\$7,020	\$86,923	\$7,020	\$86,901	\$7,020	\$86,881	\$7,020	\$86,862	\$7,020	\$86,845	\$7,020
Percent Contributed	54%	85%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%
Cow-Calf	\$80,842	\$57,422	\$82,880	\$13,800	\$82,322	\$13,800	\$81,960	\$13,800	\$81,687	\$13,800	\$81,411	\$13,800	\$81,160	\$13,800	\$80,931	\$13,800
Percent Contributed	51%	49%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%
Hay	\$24,916	\$16,616	\$20,302	\$7,786	\$20,302	\$7,786	\$20,302	\$7,786	\$20,302	\$7,786	\$20,302	\$7,786	\$20,302	\$7,786	\$20,302	\$7,786
Percent Contributed	88%	40%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%

Interest on Variable Expenses

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298	\$ 1,129	\$ 298
Steers	\$ -	\$ 1,801	\$ 3,265	\$ -	\$ 3,265	\$ -	\$ 3,265	\$ -	\$ 3,265	\$ -	\$ 3,265	\$ -	\$ 3,265	\$ -	\$ 3,265	\$ -
Cow-Calf	\$ 1,444	\$ 3,802	\$ 1,397	\$ -	\$ 1,397	\$ -	\$ 1,397	\$ -	\$ 1,397	\$ -	\$ 1,397	\$ -	\$ 1,397	\$ -	\$ 1,397	\$ -
Hay	\$ 901	\$ 418	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37

Total Contribution

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
	Tenant	Landlord														
Crop	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842	\$ 44,919	\$ 14,842
Percent Contributed	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%
Steers	\$ 7,983	\$ 50,522	\$ 90,238	\$ 7,020	\$ 90,212	\$ 7,020	\$ 90,198	\$ 7,020	\$ 90,184	\$ 7,020	\$ 90,170	\$ 7,020	\$ 90,157	\$ 7,020	\$ 90,110	\$ 7,020
Percent Contributed	14%	85%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%	69%	7%
Cow-Calf	\$ 82,287	\$ 61,024	\$ 84,068	\$ 13,800	\$ 83,720	\$ 13,800	\$ 83,388	\$ 13,800	\$ 83,058	\$ 13,800	\$ 82,808	\$ 13,800	\$ 82,558	\$ 13,800	\$ 82,329	\$ 13,800
Percent Contributed	57%	48%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%	62%	18%
Hay	\$25,816	\$17,034	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827
Percent Contributed	88%	40%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%	72%	38%

	Tenant	Landlord
Crops	75.2%	24.8%
Steers	81.5%	18.5%
Cow-Calf	77.6%	22.4%
Hay	71.7%	28.3%

Crops

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ (57,000)	\$ 26,666	\$ (170,200)	33%	67%
Year 1	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 2	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 3	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 4	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 5	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 6	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 7	\$ (34,641)	\$ (8,624)	\$ (43,284)	80%	20%
Year 8	\$ (22,441)	\$ 96,988	\$ 74,486	-30%	130%
NPV of Costs	\$ (72,632)	\$ (97,518)	\$ (370,147)	74%	26%
			\$333,984		
			\$436,183		

Steers

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ (1,200)	\$ 26,666	\$ (105,800)	1%	99%
Year 1	\$ (7,800)	\$ (43,721)	\$ (51,321)	15%	85%
Year 2	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 3	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 4	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 5	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 6	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 7	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
Year 8	\$ (86,600)	\$ (2,020)	\$ (88,620)	98%	2%
NPV	\$ (485,378)	\$ (87,621)	\$ (572,999)	83%	15%
			\$564,066		
			\$21,070		

Cow-Calf

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ -	\$ 26,666	\$ (100,000)	0%	100%
Year 1	\$ (130,858)	\$ (49,586)	\$ (180,454)	74%	26%
Year 2	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 3	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 4	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 5	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 6	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 7	\$ (28,600)	\$ (1,900)	\$ (30,500)	94%	6%
Year 8	\$ 75,183	\$ 100,945	\$ 176,128	43%	57%
NPV	\$ (220,598)	\$ (88,095)	\$ (308,691)	71%	29%
			\$388,942		
			\$-326,119		

Hay

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ -	\$ 26,666	\$ (100,200)	0%	100%
Year 1	\$ (24,918)	\$ (11,598)	\$ (36,512)	68%	32%
Year 2	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 3	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 4	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 5	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 6	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 7	\$ (20,302)	\$ (2,798)	\$ (23,071)	88%	12%
Year 8	\$ (28,154)	\$ 97,351	\$ 71,197	-37%	137%
NPV	\$ (136,571)	\$ (58,741)	\$ (196,312)	70%	30%
			\$324,383		
			\$336,071		

7.3 Appendix B – Enterprise Input and Output – Black Soil Zone

	Input for Cropping Operations									
YEAR	0	1	2	3	4	5	6	7	8	
Soil Zone (1=brown, 2=dark brown, 3=black)										
Land Location	W3									
Parcel 1										
Number of Acres	100									
Land Cost (\$/acre)	250									
Crop Rotation		24	14	19	17	24	14	19	17	
Crop Name		Canola stubble	Spring Wheat stubble	Flax stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Flax stubble	Feed Barley stubble	
Parcel 2										
Number of Acres	100									
Land Cost (\$/acre)	250									
Crop Rotation		14	19	17	24	14	19	17	24	
Crop Name		Spring Wheat stubble	Flax stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Flax stubble	Feed Barley stubble	Canola stubble	
Parcel 3										
Number of Acres	100									
Land Cost (\$/acre)	250									
Crop Rotation		19	17	24	14	19	17	24	14	
Crop Name		Flax stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Flax stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	
Parcel 4										
Number of Acres	100									
Land Cost (\$/acre)	250									
Crop Rotation		17	24	14	19	17	24	14	19	
Crop Name		Feed Barley stubble	Canola stubble	Spring Wheat stubble	Flax stubble	Feed Barley stubble	Canola stubble	Spring Wheat stubble	Flax stubble	
Parcel 5										
Number of Acres	0									
Land Cost (\$/acre)	250									
Crop Rotation		20	14	1	22	14	1	20	14	
Crop Name		Lentil stubble	Spring Wheat stubble	Tillage Fallow	Mustard stubble	Spring Wheat stubble	Tillage Fallow	Lentil stubble	Spring Wheat stubble	
Total Number of Acres	400									
Financial Info										
Discount Rate	5%									
Int Rate on Op Loan	5%									
Building Repair Rate	2%									
Machinery Depreciation Rate	10%									
Building Depreciation Rate	5%									
Inv Cost on Mach and Buildings	5%									
Inv Cost on Land	5%									

	Input Crop Revenue Table									
	1	2	3	4	5	6	7	8	9	
Revenues per Acre										
Most Likely yield (bu./lb./ac.)	0.0	0.0	36.4	0.0	46.0	59.2	68.4	22.2	1148.0	
Most Likely Farm Price (\$/bu., lb./t.)	0.00	0.00	4.03	0.00	3.46	2.07	1.33	8.10	0.17	
EXPENSES PER ACRE										
Variable Expenses/acre										
Seed	0.00	0.00	8.86	0.00	7.50	5.78	7.20	8.30	18.20	
Fertilizer	Nitrogen	0.00	0.00	7.20	0.00	7.20	7.20	7.20	1.68	
	Phosphorus	0.00	0.00	8.40	0.00	8.40	8.40	8.40	8.40	
	Sulfur & other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Chemicals	Herbicides	2.93	14.79	15.18	0.00	14.50	14.23	7.45	19.66	
	Insecticides	0.00	0.00	2.40	0.00	2.40	0.00	0.00	1.06	
	Others	0.00	0.00	1.65	0.00	1.98	1.74	1.68	1.71	
Machinery Op	Fuel	3.70	0.74	8.29	0.00	8.29	8.29	8.29	7.03	
	Repair	3.40	2.55	8.00	0.00	8.00	8.00	8.00	9.60	
Custom Work & Hired Labour		1.50	0.00	6.25	0.00	6.25	4.25	4.25	3.00	
Crop Ins Premium		0.00	0.00	4.83	0.00	6.66	4.43	5.67	5.78	
Utilities & Miscellaneous		3.02	3.02	3.02	0.00	3.02	3.02	3.02	3.02	
Interest on Variable Exp		1.42	2.06	2.28	0.00	2.35	2.06	1.92	2.34	
Other Expenses (\$/acre)										
Property Taxes		4.75	4.75	4.75	0.00	4.75	4.75	4.75	4.75	
Insurance & Licenses		2.02	2.02	2.02	0.00	2.02	2.02	2.02	2.02	
Labour & Management		24.07	24.07	24.07	0.00	24.07	24.07	24.07	24.07	
Voice of Investment	Machinery	68.00	51.00	180.00	0.00	180.00	180.00	180.00	180.00	
	Building	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	

	Input Crop Expenses Table									
	1	2	3	4	5	6	7	8	9	
	Tillage Fallow	Chem Fallow	FS Spring Wheat	FS Durum Wheat	FS CPS Wheat	FS Feed Barley	FS Feed Oats	Flax	Lentil	
Revenues per Acre										
Most Likely yield (bu./lb./ac.)	0.0	0.0	36.4	0.0	46.0	59.2	68.4	22.2	1148.0	
Most Likely Farm Price (\$/bu., lb./t.)	0.00	0.00	4.03	0.00	3.46	2.07	1.33	8.10	0.17	
EXPENSES PER ACRE										
Variable Expenses/acre										
Seed	0.00	0.00	8.86	0.00	7.50	5.78	7.20	8.30	18.20	
Fertilizer	Nitrogen	0.00	0.00	7.20	0.00	7.20	7.20	7.20	1.68	
	Phosphorus	0.00	0.00	8.40	0.00	8.40	8.40	8.40	8.40	
	Sulfur & other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Chemicals	Herbicides	2.93	14.79	15.18	0.00	14.50	14.23	7.45	19.66	
	Insecticides	0.00	0.00	2.40	0.00	2.40	0.00	0.00	1.06	
	Others	0.00	0.00	1.65	0.00	1.98	1.74	1.68	1.71	
Machinery Op	Fuel	3.70	0.74	8.29	0.00	8.29	8.29	8.29	7.03	
	Repair	3.40	2.55	8.00	0.00	8.00	8.00	8.00	9.60	
Custom Work & Hired Labour		1.50	0.00	6.25	0.00	6.25	4.25	4.25	3.00	
Crop Ins Premium		0.00	0.00	4.83	0.00	6.66	4.43	5.67	5.78	
Utilities & Miscellaneous		3.02	3.02	3.02	0.00	3.02	3.02	3.02	3.02	
Interest on Variable Exp		1.42	2.06	2.28	0.00	2.35	2.06	1.92	2.34	
Other Expenses (\$/acre)										
Property Taxes		4.75	4.75	4.75	0.00	4.75	4.75	4.75	4.75	
Insurance & Licenses		2.02	2.02	2.02	0.00	2.02	2.02	2.02	2.02	
Labour & Management		24.07	24.07	24.07	0.00	24.07	24.07	24.07	24.07	
Voice of Investment	Machinery	68.00	51.00	180.00	0.00	180.00	180.00	180.00	180.00	
	Building	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	

Input Sheet

Input for Steer Operation

Financial Information (Livestock) (see help files)

Discount Rate	5%
Int Rate on Op Loan	9%
Building Repair Rate	2%
Machinery Depreciation Rate	10%
Building Depreciation Rate	5%
Inv Cost on Mach and Buildings	5%
Inv Cost on Land	5%

Land Information (Steers)

	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5
Number of Acres	100	100	100	100	0
Stocking Rate (AUM/Acre)	1.2	1.2	1.2	1.2	1.2
Land Cost (\$/Acre)	250	250	250	250	250
Property Tax (\$/Acre)	4.75	4.75	4.75	4.75	4.75
Nurse Crop (1 for Yes, 0 for No)	1	1	1	1	1
Area of Province (N-North, S-South)	S				
Length of Grazing Period	6	6	6	6	6
Animal Unit Months	120	120	120	120	0
Animals Grazed on Parcel	30	30	30	30	0

Grazing Information (Steers)

Pasture seeding required (1 for Yes, 0 for No)	1
Total Number of Acres	400
Total Animal Unit Months	480
Steers Grazed on Above	120

Capital Value	Initial Capital Investment (amount for steer operation only)									
	0	1	2	3	4	5	6	7	8	
Tenant Con'tn (machinery, etc)	1200.00	1200.00	1080.00	972.00	874.80	787.32	708.56	637.73	573.96	516.56
Landlord Con'tn (machinery, etc)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tenant Con'tn (fences, water, etc)	0.00	50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ltdrd Con'tn(fence water chute etc.)	4600.00	4600.00	4370.00	4151.50	3843.93	3746.73	3559.39	3381.42	3212.35	3051.73
Total Capital Investment	5800.00	5800.00	5450.00	5123.50	4818.73	4534.05	4267.98	4019.15	3786.31	3568.29

YEAR	Steer Revenue							
	0	1	2	3	4	5	6	7
Market Weight (lb)	900	900	900	900	900	900	900	900
Most Likely Price (\$/lb)	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Total Revenue (\$/steer)	819.00	819.00	5819	5819	5819	5819	5819	5819
Nurse Crop Revenue								
Nurse Crop Yield (t/bu/acre)	31.4	0	0	0	0	0	0	0
Nurse Crop Price (\$/bu)	3.55	0	0	0	0	0	0	0
Total Revenue (\$/acre)	111.47	0	0	0	0	0	0	0

YEAR	Steer Expenses							
	0	1	2	3	4	5	6	7
VARIABLE EXPENSES								
Most Likely Purchase Price	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Purchase Weight	550	550	550	550	550	550	550	550
Death Loss %	2%	2%	2%	2%	2%	2%	2%	2%
Vet and Medicine (\$/steer)	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15
Trucking (\$/steer)	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45
Selling Commission (\$/steer)	11.75	11.75	11.75	11.75	11.75	11.75	11.75	11.75
Utilities (\$/steer)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Fuel, Lube and Repairs (\$/steer)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Miscellaneous (\$/steer)	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Supplements on Pasture (\$/steer)	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19

YEAR	Other Expenses							
	0	1	2	3	4	5	6	7
OTHER EXPENSES								
Fence Repair (\$/steer)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Nurse Crop Costs (\$/acre)								
Seed, Fertilizer, Herbicides	48.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery Fuel and Repair	21.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	9.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Nurse Crop Costs	80.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00

YEAR	Established Pasture Costs							
	0	1	2	3	4	5	6	7
Fertilizer Cost (\$/acre)	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 - 40' fertilizer spreader	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Yearly Pasture Costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seeding (\$/acre)								
1 - fertilizer spreader	0.5	0	0	0	0	0	0	0
1 - 20' press drill	2.7	0	0	0	0	0	0	0
Affaf's seed (2 lbs/ac)	3.6	0	0	0	0	0	0	0
Crested W seed (3 lbs/ac)	3.9	0	0	0	0	0	0	0
Fertilizer (30 lbs/ac, \$3/lb)	9	0	0	0	0	0	0	0
Total Cost	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0

YEAR	Interest							
	0	1	2	3	4	5	6	7
Interest on Operating (\$/steer)	15.01	27.20	27.20	27.20	27.20	27.20	27.20	27.20
Labour and Management (\$/steer)	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00

Input Sheet

Input for Cow-Calf Operation

YEAR	0	1	2	3	4	5	6	7	8
Financial Information (Cow-Calf)									
Discount Rate		5%							
Int Rate on Op Loan		9%							
Building Repair Rate		2%							
Machinery Depreciation Rate		10%							
Building Depreciation Rate		5%							
Inv Cost on Mach and Buildings		5%							
Inv Cost on Land		5%							
Land Information (Cow-Calf)									
Parcel 1	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres	100	100	100	100	0				
Stocking Rate (AUM/acre)	1.2	1.2	1.2	1.2	1.2				
Land Cost (\$/acre)	250	250	250	250	250				
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75				
Nurse Crop (1 for Yes, 0 for No)	1	1	1	1	1				
Length of Grazing Period	5	5	5	5	5				
Animal Unit Months	120	120	120	120	0				
Animals Grazed on Parcel	20	20	20	20	0				
Grazing Information (Cows)									
Pasture seeding required (1 for Yes, 0 for No)		1							
Total Number of Acres		400							
Total Animal Unit Months		480							
Cows grazed on above land		80							
Nurse Crop Revenue									
Nurse Crop Yield (t, bu/acre)		31.4							
Nurse Crop Price (\$/t,bu)		3.55							
Total Revenue (\$/acre)		111.47							
Cows									
Avg Weight (lbs)	0	1200	1200	1200	1200	1200	1200	1200	1200
Value of New Cow	0	1100	1100	1100	1100	1100	1100	1100	1100
Cull Cow	0	700	700	700	700	700	700	700	700
Death loss of cows	0	1%	1%	1%	1%	1%	1%	1%	1%
Cow replace rate	0	12%	12%	12%	12%	12%	12%	12%	12%
Bulls									
# of cows required for one bull	0	30	30	30	30	30	30	30	30
# of bulls required	0	3	3	3	3	3	3	3	3
Value of new bull	\$0	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Value of cull bull	\$0	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Useful life of bull (years)	0	4	4	4	4	4	4	4	4
Death loss of bulls	0%	2%	2%	2%	2%	2%	2%	2%	2%
Calves									
Most Likely Male Calf price (\$/lb)	0.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Most Likely Female Calf price (\$/lb)	0.00	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Calving percent	0%	94%	94%	94%	94%	94%	94%	94%	94%
Post calving death loss	0%	4%	4%	4%	4%	4%	4%	4%	4%
Weaning per cent	0%	90%	90%	90%	90%	90%	90%	90%	90%
Average Weaning Wts (lb)									
Weaning wt of steers	0	550	550	550	550	550	550	550	550
Weaning wt of heifers	0	520	520	520	520	520	520	520	520
Other Production Info									
Winter feeding period (days)	0	180	180	180	180	180	180	180	180
Fence & Mach Repair Rate	0%	2%	2%	2%	2%	2%	2%	2%	2%
Prices									
Hay price (\$/tonne)	\$0.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Barley price (\$/tonne)	\$0.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00	\$94.00
Straw price (\$/tonne)	\$0.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Salt (\$/kg)	\$0.00	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18
1:1 trace mineral (\$/kg)	\$0.00	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54	\$0.54
Protein Supplement (\$/kg)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Investment									
Buildings and handling fac									
Tenant Contribution (corrals, sheds, fences, etc.)		5339							
Landlord Contribution (fences, water requirements, etc.)		4074							

Input Sheet

	9413	Input Sheet							
Total Value of fence and bldgs	9413								
Equipment for Cow-Calf	10150								
Tenant Contribution (tractor, loader, mixmill, etc.)	10150								
Landlord Contribution (Seeder, etc)	0								
Total Equipment	10150								
Land Value	100000								
Value of Cows purchased	88000.00								
Value of Bulls purchased	7200								
Total Capital Investment	214763.00								
Cow-Calf Expenses									
YEAR	0	1	2	3	4	5	6	7	8
Cows	0								
Feed									
Hay									
Tonnes/cow/day	0	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139
Tonnes/cow/period	0	2.502	2.502	2.502	2.502	2.502	2.502	2.502	2.502
Hay Cost (\$/cow)	0	100.08	100.08	100.08	100.08	100.08	100.08	100.08	100.08
Barley									
Tonnes/cow/day	0	0	0	0	0	0	0	0	0
Tonnes/cow/period	0	0	0	0	0	0	0	0	0
Barley Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Salt									
Kg/cow/period	0	12	12	12	12	12	12	12	12
Salt cost (\$/cow)	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Mineral									
Kg/cow	0	22	22	22	22	22	22	22	22
Mineral Cost (\$/cow)	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Protein									
Kg/cow/period	0	0	0	0	0	0	0	0	0
Protein Cost (\$/cow)	0	0	0	0	0	0	0	0	0
Total Feed Cost (\$/cow)	0	114.12	114.12	114.12	114.12	114.12	114.12	114.12	114.12
Bedding									
Tonnes/animal/day	0	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022
Tonnes/animal	0	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396
Bedding cost (\$/cow)	0	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92
Veterinary and Medicine									
IBR,BVD,PI3 & BRSV	0	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
Scour vaccine	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Ivomec	0	9	9	9	9	9	9	9	9
ADE (2 treatments)	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fly tag	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Medicine Cost (\$/cow)	0	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84
Veterinary Cost (\$/cow)	0	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Vet & Med C (\$/cow)	0	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
Vet & Med Cost (calves)									
Blackleg	0	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Flytag	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Medicine Cost (\$/calf)	0	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39
Bulls									
Feed									
Hay									
Tonnes/bull/day	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Tonnes/bull/period	0	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Hay cost (\$/bull)	0	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2
Barley									
Tonnes/bull/day	0	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Tonnes/bull/period	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Barley Cost (\$/bull)	0	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
Salt & Minerals									
Salt cost (\$/bull)	0	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Mineral cost (\$/bull)	0	11.88	11.88	11.88	11.88	11.88	11.88	11.88	11.88
Protein									
Kg/bull/period	0								
	0	Page 20		0	0	0	0	0	0

Protein Cost (\$/bull)	0	Input Sheet	0	0	0	0	0	0
Total Feed Cost (\$/bull)	0	157.44	157.44	157.44	157.44	157.44	157.44	157.44
Vet & Med	0	20	20	20	20	20	20	20
Veterinary exam (\$/bull)	0	60	60	60	60	60	60	60
Semen test	0	10	10	10	10	10	10	10
Veterinary cost	0	90	90	90	90	90	90	90
Vet & Med cost (\$/bull)	0							
Trucking	0.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Selling commission (\$/hd)	0.00	15.75	15.75	15.75	15.75	15.75	15.75	15.75
Total costs (\$/hd)	0.00	18.75	18.75	18.75	18.75	18.75	18.75	18.75
Facility and Fence (\$/hd)	0.00	14.71	14.71	14.71	14.71	14.71	14.71	14.71
Manure Removal (\$/hd)	0.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Interest on Op Loan (\$/hd)	0.00	63.08	17.47	17.47	17.47	17.47	17.47	17.47
Miscellaneous (\$/hd)	0.00	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Supplements on Pstr (\$/hd)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machinery Dep (\$/hd)	0.00	-126.88	12.69	11.42	10.28	9.25	8.32	7.49
Building Dep (\$/hd)	0.00	0.00	5.88	5.59	5.31	5.04	4.79	4.55
Machinery Inv (\$/hd)	0.00	12.69	11.42	10.28	9.25	8.32	7.49	6.74
Building Investment (\$/hd)	0.00	0.59	11.18	10.82	10.09	9.58	9.10	8.65
Land Investment (\$/hd)	0.00	62.50	62.50	62.50	62.50	62.50	62.50	62.50
Breeding Herd Investment (\$/hd)	0.00	148.75	148.75	148.75	148.75	148.75	148.75	148.75
Breeding Herd Replacement	0.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00	4740.00
Labour and Management (\$/hd)	0.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00
Seeding (\$/acre)								
1 - fertilizer spreader		0.50						
1 - 20' press drill		2.70						
Alelfa seed (2 lbs/ac)		3.60						
Crested W seed (3 lbs/ac)		3.90						
Fertilizer (30 lbs/ac, \$.3/lb)		9.00						
Total Cost		19.70						
Established Pasture Costs								
Fertilizer Cost (\$/acre)		0						
1 - 40' fertilizer spreader		0.00						
Total Yearly Pasture Costs (\$/acre)		0.00						
Nurse Crop Costs (\$/acre)								
Seed, Fertilizer, Herbicide		48.91						
Machinery Fuel and Repair		21.65						
Other		9.79						
Total Nurse Crop Costs		80.35						
YEAR	0	1	2	3	4	5	6	7
Capital Value								8
Buildings and handling fac								
Tenant Contribution (corrals, sheds, fences, etc)	0	5339	5072	4818	4578	4349	4131	3925
Tenant Depreciation	0	0.00	\$3.34	\$3.17	\$3.01	\$2.86	\$2.72	\$2.58
Landlord Contribution (fences, water requirements, etc.)	0	4074	3870	3677	3493	3318	3152	2995
Landlord Depreciation	0	0.00	\$2.55	\$2.42	\$2.30	\$2.18	\$2.07	\$1.97
Total Value of fence and bldgs	0	9413	8942	8495	8070	7667	7284	6919
Equipment for Cow-Calf								
Tenant Contribution (tractor, loader, mixmill, etc.	0	10150	9135	8222	7399	6659	5993	5394
Tenant Depreciation	0	0.00	12.69	11.42	10.28	9.25	8.32	7.49
Landlord Contribution (Seeder, etc)	0	0	0	0	0	0	0	0
Landlord Depreciation	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Equipment	0	10150	9135	8222	7399	6659	5993	5394
Land Value	100000							100000
Value of Cows purchased	0	88000						88000
Value of Bulls purchased	0	7200						7200
Total Tenant Capital Invested	0	110689						103,783
Total Landlord Capital Invested	100000	4074						\$102,845
Total Capital Invested	100000	114763						206,628

Input Sheet

Input for Forage Operation

YEAR	0	1	2	3	4	5	6	7	8
Soil Zone (1=brown, 2=dark brown, 3=black)				3					
Land Location	W3								
Land Information (Forage)	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5				
Number of Acres	100	100	100	100	0				
Land Cost (\$/acre)	250	250	250	250	250				
Property Tax (\$/acre)	4.75	4.75	4.75	4.75	4.75				
Total Number of Acres		400							
Nurse Crop Required (0=No, 1=Yes)		1							
Financial Info									
Discount Rate		5%							
Int Rate on Op Loan		9%							
Building Repair Rate		2%							
Machinery Depreciation Rate		10%							
Building Depreciation Rate		5%							
Inv Cost on Mach and Buildings		5%							
Inv Cost on Land		5%							
Forage Revenue									
	36 Hay Seed Year no Nurse	37 Hay Seed Year Nurse	38 Hay Estab	39 Hay Breaking Year					
Revenue per Acre									
Most likely yield (bu./lb./ac.)	0.0	36.4	0.96	0.70					
Most Likely Farm Price (\$/bu., lb.)	0.0	4.03	70.00	70.00					
Forage Expenses									
	Hay no Nurse	Hay with Nurse	Hay Estab	Hay Breaking					
EXPENSES PER ACRE									
Variable Expenses (\$/acre)									
Seed	19.80	26.88	0.00	0.00					
Fertilizer	Nitrogen 0.00	15.00	0.00	0.00					
	Phosphorus 10.00	10.00	10.00	10.00					
	Sulfur & other 0.00	0.00	0.00	0.00					
Chemicals	Herbicides 0.00	15.00	0.00	0.00					
	Insecticides 0.00	0.00	0.00	0.00					
	Others 0.00	0.00	0.00	0.00					
Machinery Op	Fuel 0.00	0.00	0.00	0.00					
	Repair 0.00	0.00	0.00	0.00					
Custom Work & Hired Labour	40.00	40.00	29.00	43.00					
Crop Ins Premium	0.00	6.12	0.00	0.00					
Utilities & Miscellaneous	2.08	2.08	2.08	2.08					
Interest on Variable Exp	3.23	5.43	1.85	2.48					
Other Expenses (\$/acre)									
Property Taxes	0.00	0.00	0.00	0.00					
Insurance & Licenses	0.00	0.00	0.00	0.00					
Labour & Management	10.00	10.00	10.00	10.00					
Value of Investment									
Machinery	0.00	0.00	0.00	0.00					
Building	0.50	0.50	0.50	0.50					

ANNUAL INCOME STATEMENT										
YEAR	Land Location	W3	Cropping Operation							8
			0	1	2	3	4	5	6	
Revenue										
Crop			53,028	53,028	53,028	53,028	53,028	53,028	53,028	53,028
Total Revenue		\$342,728	0	53,028	53,028	53,028	53,028	53,028	53,028	53,028
Expenses	L/T/S	L Share								
Variable Expenses										
Seed	S	33%	2,496	2,496	2,496	2,496	2,496	2,496	2,496	2,496
Fertilizer	Nitrogen	S	33%	5,760	5,760	5,760	5,760	5,760	5,760	5,760
	Phosphorus	S	33%	3,360	3,360	3,360	3,360	3,360	3,360	3,360
	Sulfur & other	S	33%	540	540	540	540	540	540	540
Chemicals	Herbicides	S	33%	6,460	6,460	6,460	6,460	6,460	6,460	6,460
	Insecticides	S	33%	367	367	367	367	367	367	367
	Others	S	33%	740	740	740	740	740	740	740
Machinery	Fuel	T		3,071	3,071	3,071	3,071	3,071	3,071	3,071
	Repair	T		3,360	3,360	3,360	3,360	3,360	3,360	3,360
Custom Work & Hired Labour	T			1,900	1,900	1,900	1,900	1,900	1,900	1,900
Crop Ins Premium	T			1,968	1,968	1,968	1,968	1,968	1,968	1,968
Utilities & Miscellaneous	T			1,208	1,208	1,208	1,208	1,208	1,208	1,208
Interest on Variable Exp	*****			1,406	1,406	1,406	1,406	1,406	1,406	1,406
Total Variable Expenses	*****			32,656	32,656	32,656	32,656	32,656	32,656	32,656
Other Expenses										
Building Repair	T			264	264	264	264	264	264	264
Property Taxes	L			1,900	1,900	1,900	1,900	1,900	1,900	1,900
Insurance & Licenses	T			808	808	808	808	808	808	808
Machinery Depreciation	T		\$51,200	6,400	6,400	6,400	6,400	6,400	6,400	6,400
Building Depreciation	L		\$5,280	660	660	660	660	660	660	660
Machinery Investment	T		\$12,800	3,200	3,200	3,200	3,200	3,200	3,200	3,200
Building Investment	L		\$7,920	660	660	660	660	660	660	660
Land Investment	L			5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Other Expenses	*****			18,892	18,892	18,892	18,892	18,892	18,892	18,892
Labour & Management	T			9,628	9,628	9,628	9,628	9,628	9,628	9,628
Total Expenses	*****			61,176	61,176	61,176	61,176	61,176	61,176	61,176
Net Income				-8,149	-8,149	-8,149	-8,149	-8,149	-8,149	-8,149
Return (\$/acres)				-20.37	-20.37	-20.37	-20.37	-20.37	-20.37	-20.37
Average Return (\$/acre)				-20.37						
Return to Lab and Man (\$/acres)				3.70	3.70	3.70	3.70	3.70	3.70	3.70
Avg Return to Lab and Man (\$/acre)				3.70						
				\$177,200						
NPV (net present value)				-\$177,200	\$7,401	\$7,049	\$6,713	\$6,393	\$6,069	\$5,799
PI (profitability index)				-45,265						
IRR (internal rate of return)				0.74						
				0.5%						
										\$120,720
										\$86,968

ANNUAL INCOME STATEMENT

Steer Operation

YEAR		0	1	2	3	4	5	6	7	8
Land Location	W3									
Revenue										
Nurse Crop		\$44,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Steers			\$0	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280
Total Revenue		\$584,068	\$44,588	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280	\$98,280
Expenses	L/T/S L Share									
Variable Expenses										
Seeding	L	0%	\$7,880	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Established Pasture Costs	L	0%		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nurse Crop Costs	L	0%		\$32,140	\$0	\$0	\$0	\$0	\$0	\$0
Steer Cost	T		\$0	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020	\$64,020
Death Loss	T		\$0	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320
Vet and Medicine	T		\$0	\$738	\$738	\$738	\$738	\$738	\$738	\$738
Marketing	T		\$0	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784	\$2,784
Fuel, Lube & Repairs	T		\$0	\$360	\$360	\$360	\$360	\$360	\$360	\$360
Interest on Variable Exp	*****		\$1,801	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265	\$3,265
Miscellaneous & Utilities	T		\$0	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280	\$1,280
Supplements on Pasture	T		\$0	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063	\$2,063
Total Variable Costs	*****		\$41,821	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809	\$75,809
Other Expenses										
Fence Repair	L		\$0	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Property Taxes	L		\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Machinery Depreciation - Tenant	T		\$120	\$108	\$97	\$87	\$79	\$71	\$64	\$57
Machinery Depreciation - Landlord	L		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Depreciation - Tenant	T		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Depreciation - Landlord	L		\$230	\$219	\$208	\$197	\$187	\$178	\$169	\$161
Machinery Investment	T		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Investment	T		\$273	\$256	\$241	\$227	\$213	\$201	\$189	\$178
Land Investment	L		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Total Other Expenses	*****		\$7,523	\$7,603	\$7,586	\$7,531	\$7,499	\$7,470	\$7,442	\$7,416
Labour and Management	T		\$9,628	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800	\$10,800
Total Costs	*****		\$58,971	\$94,212	\$94,175	\$94,141	\$94,109	\$94,079	\$94,051	\$94,026
Net Income			-\$14,383	\$4,068	\$4,105	\$4,139	\$4,171	\$4,201	\$4,229	\$4,254
Return (\$/head)				-\$120	\$34	\$34	\$34	\$35	\$35	\$35
Average Return (\$/head)					\$15					
Return (\$/acre)				-\$36	\$10	\$10	\$10	\$10	\$11	\$11
Average Return (\$/acre)					\$4.62					
Return to Lab and Man (\$/acre)				-\$12	\$37	\$37	\$37	\$37	\$38	\$38
Avg Return to Lab and Man (\$/acre)					\$31					
					\$105,800					\$103,568
NPV (net present value)										
NPV										
PI (profitability index)										
PI										
IRR (internal rate of return)										
IRR										

Cow-calf Inc State

ANNUAL INCOME STATEMENT Cow-Calf Operation										
YEAR		0	1	2	3	4	5	6	7	8
Land Location	W3									
Revenue										
Animals										
Male Calves		\$0	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988	\$20,988
Heifer Calves		\$0	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218	\$20,218
Nurse Crop		\$44,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue		\$269,542	\$44,588	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206	\$41,206
Expenses	L/T/S L Share									
Variable Expenses										
Seeding	L	\$7,880	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Established Pasture Costs	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nurse Crop Costs	L	\$32,140	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cows	T									
Feed	T	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130	\$9,130
Bedding	T	\$634	\$634	\$634	\$634	\$634	\$634	\$634	\$634	\$634
Veterinary & Medicine	T	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784	\$1,784
Calves Vet & Med	T	\$172	\$172	\$172	\$172	\$172	\$172	\$172	\$172	\$172
Bulls										
Feed	T	\$472	\$472	\$472	\$472	\$472	\$472	\$472	\$472	\$472
Veterinary & Medicine	T	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270
Death Loss (cows & bulls)	T	\$0	\$828	\$828	\$828	\$828	\$828	\$828	\$828	\$828
Marketing	T	\$1,530	\$180	\$180	\$180	\$180	\$180	\$180	\$180	\$180
Fuel, Lube & Repairs	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Manure Removal	T	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Interest on Variable Exp	****	\$5,046	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397	\$1,397
Miscellaneous	T	\$857	\$857	\$857	\$857	\$857	\$857	\$857	\$857	\$857
Supplements on Pasture	T	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Variable Expenses	****	\$61,115	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924	\$16,924
Other Expenses										
Facility and Fence Repair	T	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177	\$1,177
Property Taxes	L	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Machinery Depreciation	T	\$0	\$1,015	\$914	\$822	\$740	\$666	\$599	\$539	
Machinery Depreciation	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Building Depreciation	T	\$0	\$267	\$254	\$241	\$229	\$217	\$207	\$196	
Building Depreciation	L	\$0	\$204	\$194	\$184	\$175	\$166	\$158	\$150	
Machinery Investment	T	\$508	\$457	\$411	\$370	\$333	\$300	\$270	\$243	
Building Investment	T	\$471	\$447	\$425	\$404	\$383	\$364	\$346	\$329	
Land Investment	L	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Breeding Herd Investment	T	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900
Breeding Herd Replacement	T	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740	\$4,740
Total Other Expenses	****	\$25,695	\$27,106	\$26,913	\$26,737	\$26,576	\$26,430	\$26,296	\$26,173	
Labour and Management	T	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	\$5,760	
Total Expenses	****	\$92,569	\$49,790	\$49,597	\$49,421	\$49,260	\$49,114	\$48,960	\$48,857	
Net Income		-\$47,981	-\$8,584	-\$8,391	-\$8,215	-\$8,055	-\$7,908	-\$7,774	-\$7,652	
Return (\$/head)		-\$599.77	-\$107.30	-\$104.89	-\$102.69	-\$100.68	-\$98.85	-\$97.18	-\$95.64	
Average Return (\$/head)		-\$163.38								
Return (\$/acre)		-\$119.95	-\$21.46	-\$20.98	-\$20.54	-\$20.14	-\$19.77	-\$19.44	-\$19.13	
Average Return (\$/acre)		-\$32.68								
Return to Lab and Man (\$/hd)		-\$527.77	-\$35.30	-\$32.89	-\$30.69	-\$28.68	-\$26.85	-\$25.18	-\$23.64	
Avg ret to Lab and Man (\$/hd)		-\$91.38								
Return to Lab and Man (\$/acre)		-\$105.55	-\$7.06	-\$6.58	-\$6.14	-\$5.74	-\$5.37	-\$5.04	-\$4.73	
Avg ret to Lab and Man (\$/acre)		-\$18.28								
		\$100,000	\$114,763							\$206,628
		-\$100,000	-\$137,968	\$8,710	\$9,248	\$8,807	\$8,388	\$7,988	\$7,608	\$147,100
NPV (net present value)		-39,119								
PI (profitability index)		0.61								
IRR (internal rate of return)		2.1%								

ANNUAL INCOME STATEMENT											
Crop Name			Forage Operation								
			Hay with Nurse	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Estab	Hay Breaking	
YEAR		W3	0	1	2	3	4	5	6	7	8
Land Location											
Revenue											
Crop			58,628	26,880	26,880	26,880	26,880	26,880	26,880	19,600	
Total Revenue			199,040	58,628	26,880	26,880	26,880	26,880	26,880	19,600	
Expenses	L/T/S	L Share									
Variable Expenses											
Seed	L	33%		27	0	0	0	0	0	0	0
Fertilizer	T	33%		15	0	0	0	0	0	0	0
	Nitrogen										
	Phosphorus			4000	4000	4000	4000	4000	4000	4000	4000
	Sulfur & other			0	0	0	0	0	0	0	0
Chemicals	Herbicides	L	33%	6000	0	0	0	0	0	0	0
	Insecticides	L	33%	0	0	0	0	0	0	0	0
	Others	L	33%	0	0	0	0	0	0	0	0
Machinery Op	Fuel	T		0	0	0	0	0	0	0	0
	Repair	T		0	0	0	0	0	0	0	0
Custom Work & Hired Labour	T		16000	11600	11600	11600	11600	11600	11600	17200	
Crop Ins Premium	L		2448	0	0	0	0	0	0	0	0
Utilities & Miscellaneous	L		832	832	832	832	832	832	832	832	832
Interest on Variable Exp	*****		1319	739	739	739	739	739	739	991	
Total Variable Expenses	*****		30641	17171	17171	17171	17171	17171	17171	23023	
Other Expenses											
Building Repair	L		0	0	0	0	0	0	0	0	0
Property Taxes	L		1900	1900	1900	1900	1900	1900	1900	1900	1900
Insurance & Licenses	L		0	0	0	0	0	0	0	0	0
Machinery Depreciation	T	\$0	0	0	0	0	0	0	0	0	0
Building Depreciation	L	\$80	10	10	10	10	10	10	10	10	10
Machinery Investment	T	\$0	0	0	0	0	0	0	0	0	0
Building Investment	L	\$120	10	10	10	10	10	10	10	10	10
Land Investment	L		5000	5000	5000	5000	5000	5000	5000	5000	5000
Total Other Expenses	*****		6920	6920	6920	6920	6920	6920	6920	6920	6920
Labour & Management	T		4000	4000	4000	4000	4000	4000	4000	4000	4000
Total Expenses	*****		41,561	28,091	28,091	28,091	28,091	28,091	28,091	33,943	
Net Income			17,067	-1,211	-1,211	-1,211	-1,211	-1,211	-1,211	-14,343	
Return (\$/acre)			42.67	-3.03	-3.03	-3.03	-3.03	-3.03	-3.03	-35.86	
Average Return (\$/acre)			-1.42								
Return to Labour and Mgmt (\$/acre)			52.67	6.97	6.97	6.97	6.97	6.97	6.97	-25.86	
Avg Return to Lab and Man (\$/acre)			8.58								
				Mach	\$0						
			\$100,200	Building	\$200					\$100,120	
			-\$100,200	\$21,035	\$3,454	\$3,290	\$3,133	\$2,984	\$2,842	\$2,707	\$61,455
NPV (net present value)			\$701								
PI (profitability index)			1.01								
IRR (internal rate of return)			5.1%								

Contribution

Tenant and Landlord Contribution

Expenses for	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6			Year 7			Year 8		
	Tenant	Landlord	Tenant																					
Crop	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021	\$46,155	\$15,021
Percent Contributed	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%	75%	25%
Beers	\$10,021	\$48,721	\$88,973	\$7,020	\$88,947	\$7,020	\$88,923	\$7,020	\$88,891	\$7,020	\$88,861	\$7,020	\$88,831	\$7,020	\$88,802	\$7,020	\$88,781	\$7,020	\$88,762	\$7,020	\$88,745	\$7,020	\$88,730	\$7,020
Percent Contributed	17%	83%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%
Cow-Calf	\$80,842	\$57,422	\$82,068	\$13,800	\$82,323	\$13,800	\$81,960	\$13,800	\$81,667	\$13,800	\$81,411	\$13,800	\$81,160	\$13,800	\$80,901	\$13,800	\$80,645	\$13,800	\$80,400	\$13,800	\$80,160	\$13,800	\$80,001	\$13,800
Percent Contributed	51%	49%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%
Hay	\$24,916	\$16,645	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789	\$20,302	\$7,789
Percent Contributed	80%	40%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%

Interest on Variable Expenses

	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6			Year 7			Year 8		
	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant	Tenant	Landlord	Tenant
Crop	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293	\$ 1,113	\$ 293
Beers	\$ 1	\$ 1,801	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1	\$ 3,265	\$ 1
Cow-Calf	\$ 1,444	\$ 3,602	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -	\$ 1,387	\$ -
Hay	\$ 901	\$ 419	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37	\$ 702	\$ 37

Total Contribution

	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6			Year 7			Year 8		
	Tenant	Landlord	Tenant																					
Crop	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314	\$ 47,268	\$ 15,314
Percent Contributed	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%	78%	24%
Beers	\$ 10,021	\$ 9,502	\$ 9,226	\$ 7,020	\$ 9,226	\$ 7,020	\$ 9,018	\$ 7,020	\$ 9,018	\$ 7,020	\$ 8,914	\$ 7,020	\$ 8,914	\$ 7,020	\$ 8,811	\$ 7,020	\$ 8,811	\$ 7,020	\$ 8,708	\$ 7,020	\$ 8,708	\$ 7,020	\$ 8,605	\$ 7,020
Percent Contributed	17%	83%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%	83%	7%
Cow-Calf	\$ 62,287	\$ 81,024	\$ 84,088	\$ 13,800	\$ 83,720	\$ 13,800	\$ 83,388	\$ 13,800	\$ 83,085	\$ 13,800	\$ 82,809	\$ 13,800	\$ 82,588	\$ 13,800	\$ 82,320	\$ 13,800	\$ 82,000	\$ 13,800	\$ 81,645	\$ 13,800	\$ 81,320	\$ 13,800	\$ 81,000	\$ 13,800
Percent Contributed	51%	49%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%	82%	19%
Hay	\$25,916	\$17,084	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827	\$21,004	\$7,827
Percent Contributed	80%	40%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%	72%	28%

	Tenant	Landlord
Crops	75.9%	24.5%
Beers	81.9%	18.1%
Cow-Calf	77.6%	22.4%
Hay	71.7%	28.3%

Crops

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ (84,000)	\$ 46,000	\$ (177,200)	36%	64%
Year 1	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 2	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 3	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 4	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 5	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 6	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 7	\$ (38,555)	\$ (8,701)	\$ (45,256)	81%	19%
Year 8	\$ (23,750)	\$ 89,219	\$ 75,464	-31%	131%
NPV of Costs	\$ (291,568)	\$ (98,365)	\$ (387,933)	75%	25%
				\$342,728	
					\$-845,265

Beers

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ (1,200)	\$ 600	\$ (100,000)	0%	100%
Year 1	\$ (9,628)	\$ (43,721)	\$ (53,349)	18%	82%
Year 2	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 3	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 4	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 5	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 6	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 7	\$ (8,600)	\$ (2,020)	\$ (8,620)	98%	2%
Year 8	\$ (75,183)	\$ 110,945	\$ 178,128	47%	57%
NPV	\$ (220,588)	\$ (88,005)	\$ (308,591)	71%	29%
				\$268,542	
					\$-338,119

Hay

	Tenant	Landlord	Total	Tenant %	Landlord %
Initial Investment	\$ (100,000)	\$ 100,000	\$ 100,000	0%	100%
Year 1	\$ (24,916)	\$ (11,629)	\$ (36,541)	68%	32%
Year 2	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 3	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 4	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 5	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 6	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 7	\$ (20,302)	\$ (2,789)	\$ (23,071)	88%	12%
Year 8	\$ (28,154)	\$ 97,361	\$ 71,197	-37%	137%
NPV	\$ (139,571)	\$ (54,769)	\$ (190,340)	70%	30%
				\$196,948	
					\$701